DYNAMIC METEOROLOGY AND HYDROGRAPHY

BY

V. BJERKNES AND DIFFERENT COLLABORATORS

PLATES

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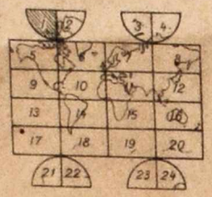
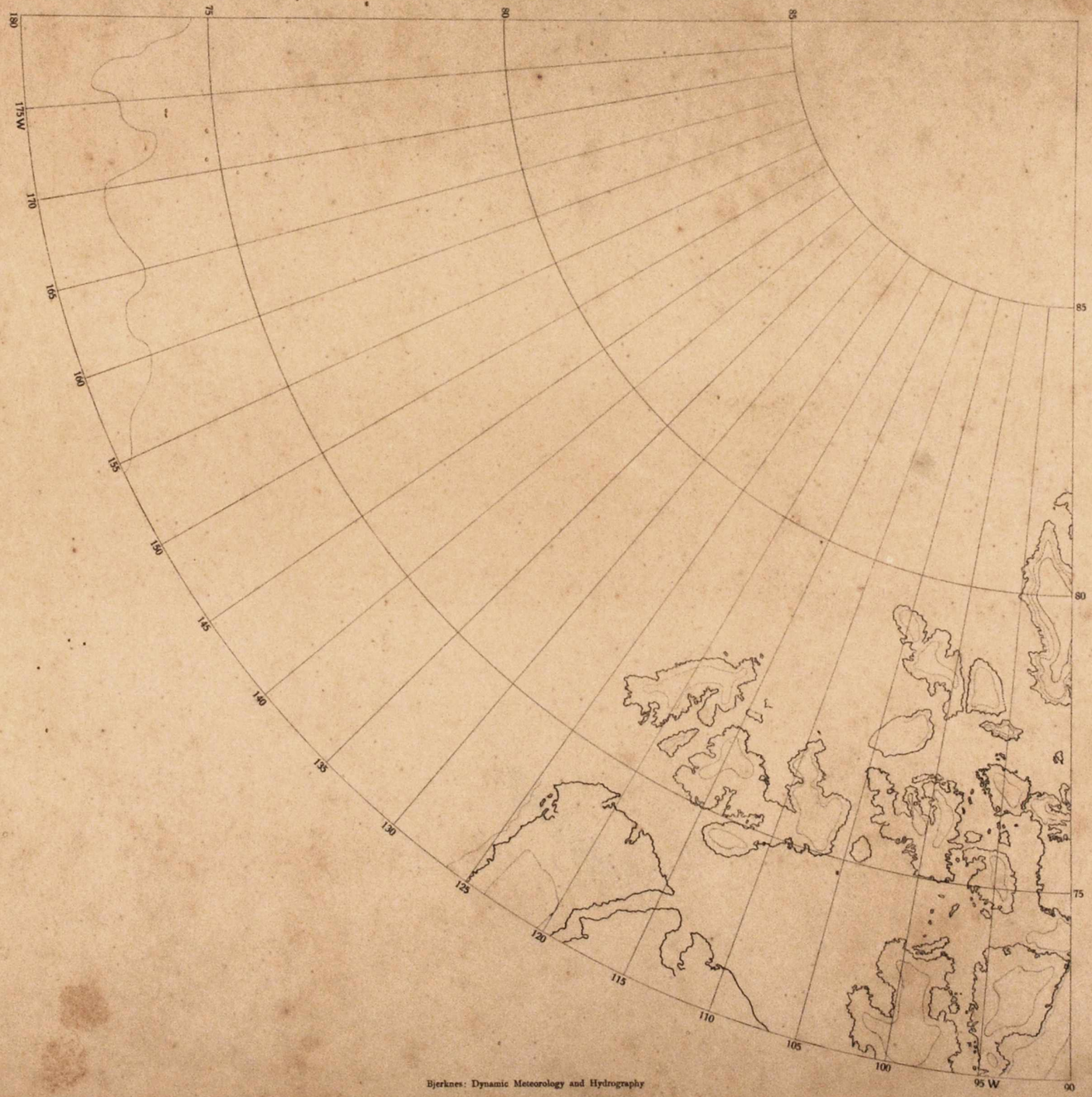
1911

PLATE I.

BATHYMETRIC AND HYPSOMETRIC MAP OF THE WORLD IN 24 SHEETS. SCALE 1 : 20 000 000.

SHEET 1.





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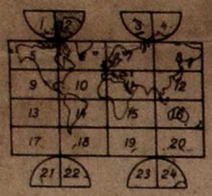

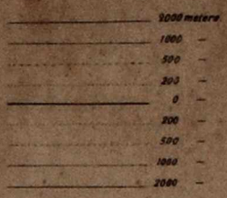

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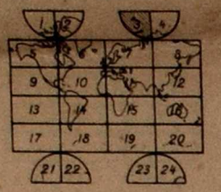

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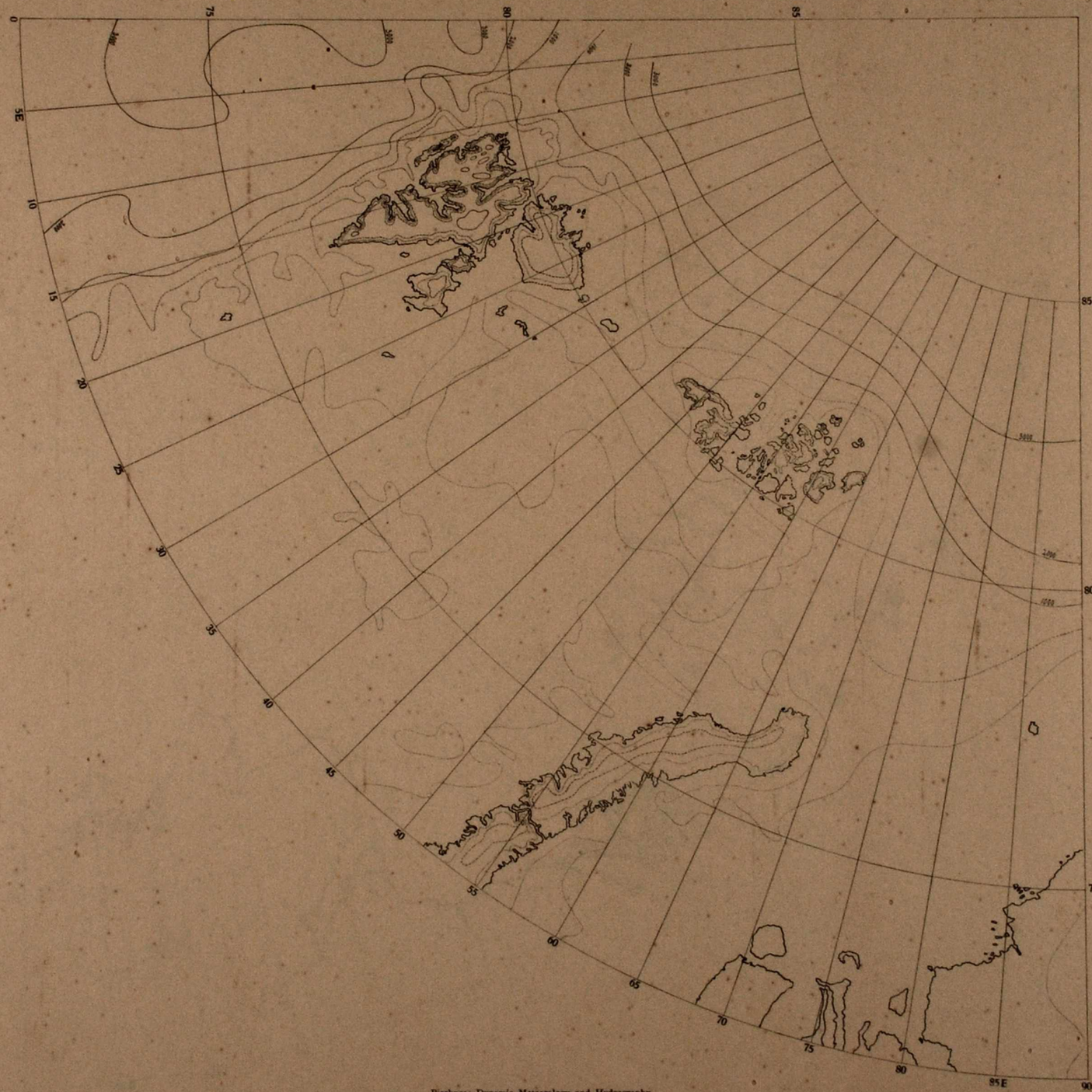

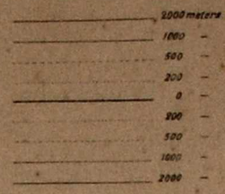

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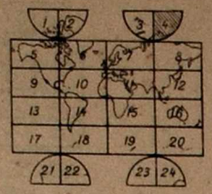

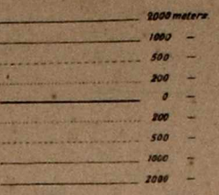

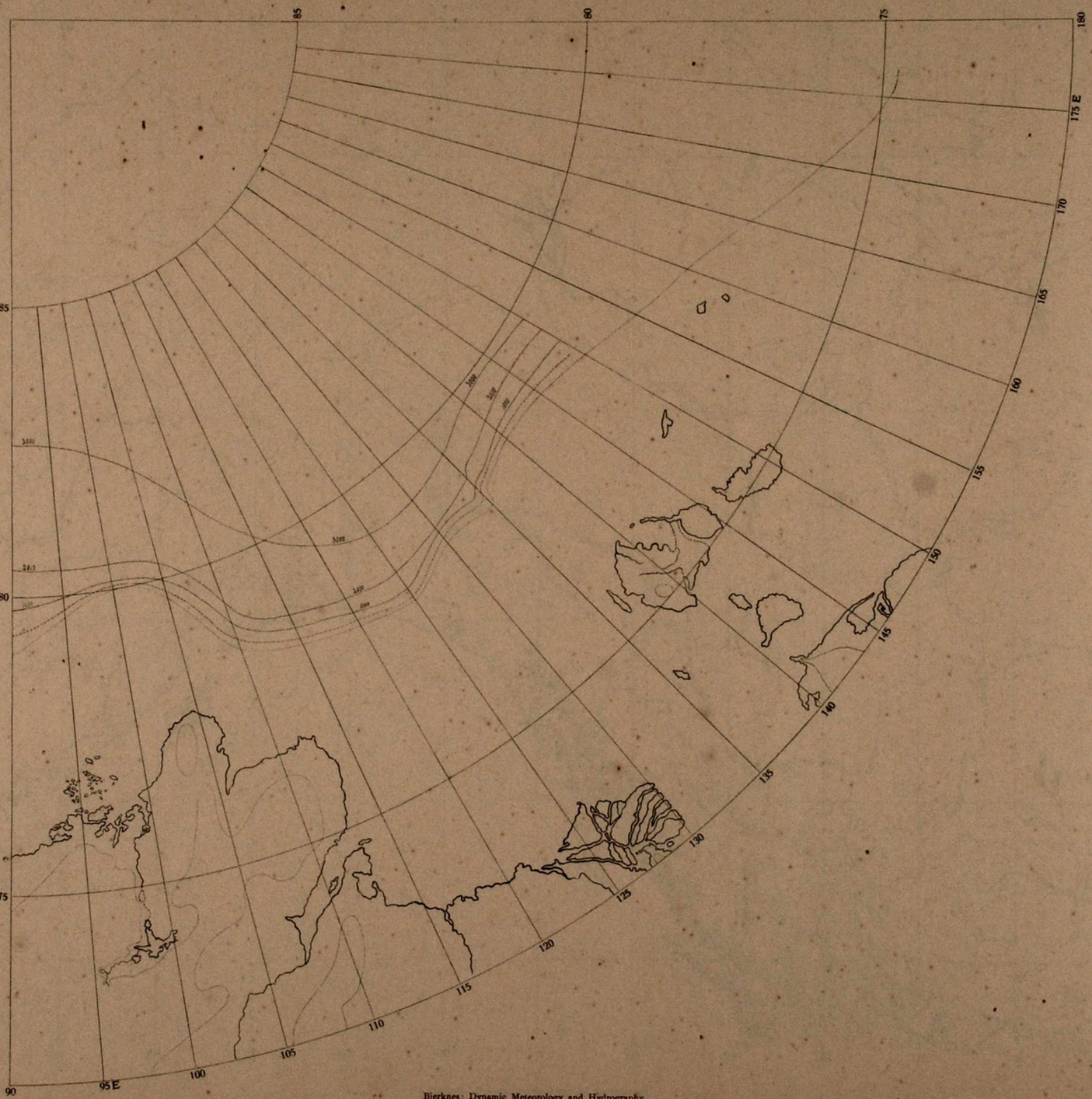

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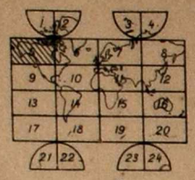
BATHYMETRIC AND HYPSOMETRIC MAP OF THE WORLD IN 24 SHEETS. SCALE 1: 20 000 000.

SHEET 5.



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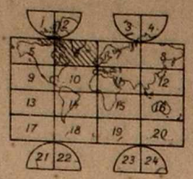
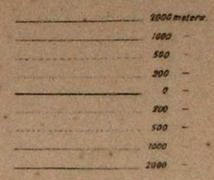
BATHYMETRIC AND HYPSOMETRIC MAP OF THE WORLD IN 24 SHEETS. SCALE 1°: 20 000 000.

SHEET 6.





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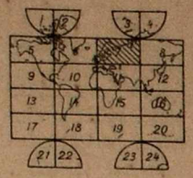

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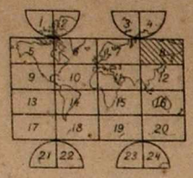
PLATE VIII.

BATHYMETRIC AND HYPSOMETRIC MAP OF THE WORLD IN 24 SHEETS. SCALE 1 : 20 000 000.

SHEET 8.



2000 meters.
1000 —
500 —
200 —
0 —
200 —
500 —
1000 —
2000 —

90 95E 100 105 110 115 120 125 130 135 140 145 150 155 160 165 170 175E 180

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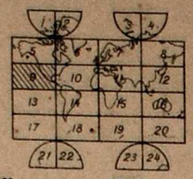

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BATHYMETRIC AND HYPSOMETRIC MAP OF THE WORLD IN 24 SHEETS. SCALE 1 : 20 000 000.

SHEET 9.

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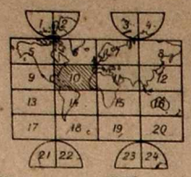
PLATE X

BATHYMETRIC AND HYPSOMETRIC MAP OF THE WORLD IN 24 SHEETS. SCALE 1 : 20 000 000.

SHEET 10.



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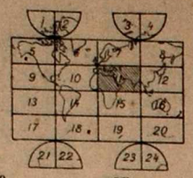
BATHYMETRIC AND HYPSOMETRIC MAP OF THE WORLD IN 24 SHEETS. SCALE 1 : 20 000 000.

SHEET 11.



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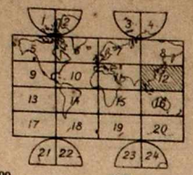
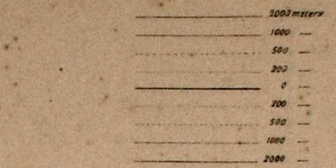
BATHYMETRIC AND HYPSOMETRIC MAP OF THE WORLD IN 24 SHEETS. SCALE 1: 20 000 000.

SHEET 12.





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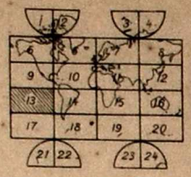

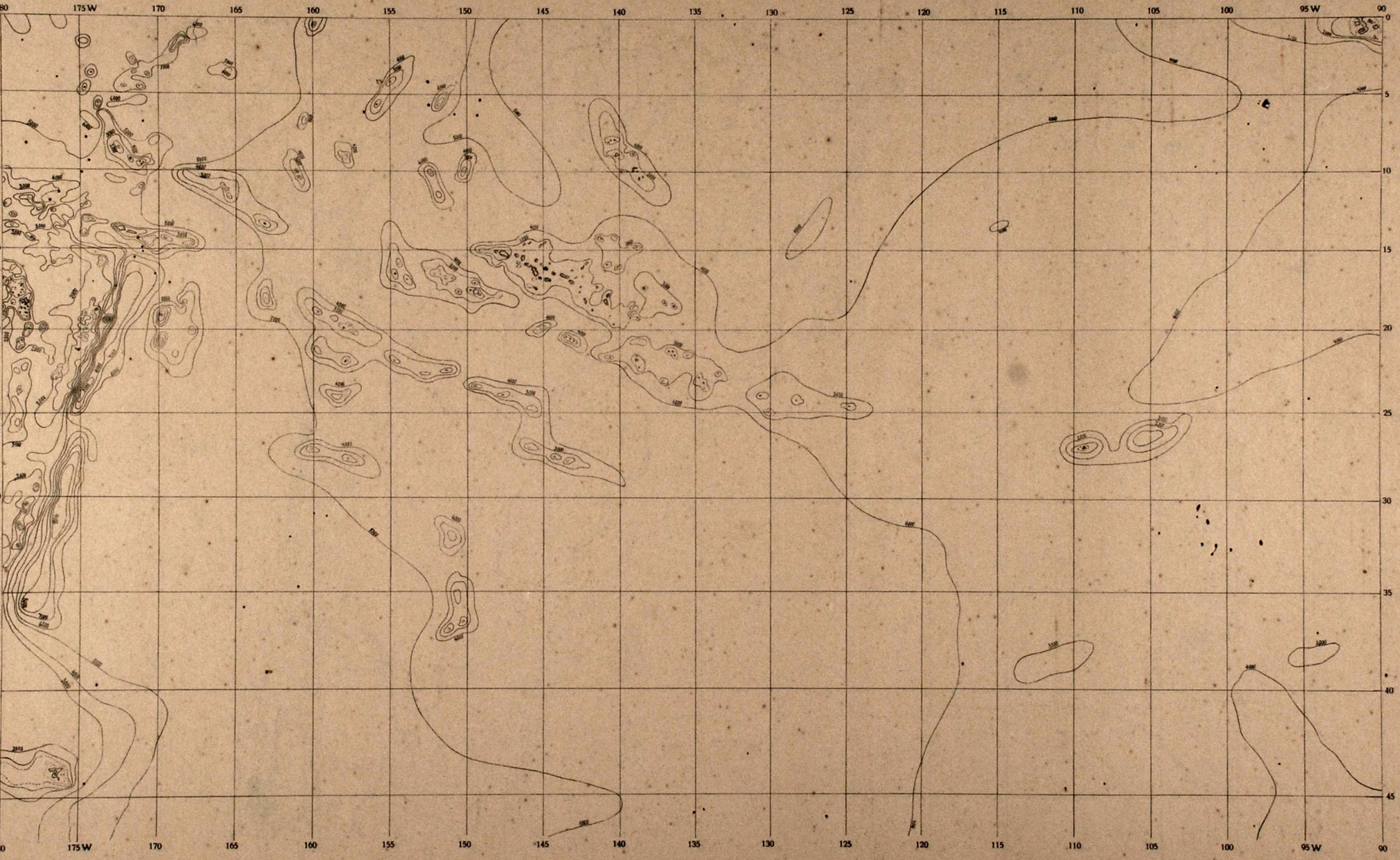

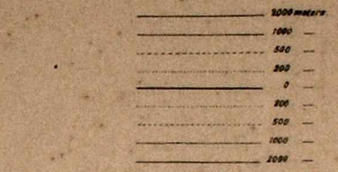

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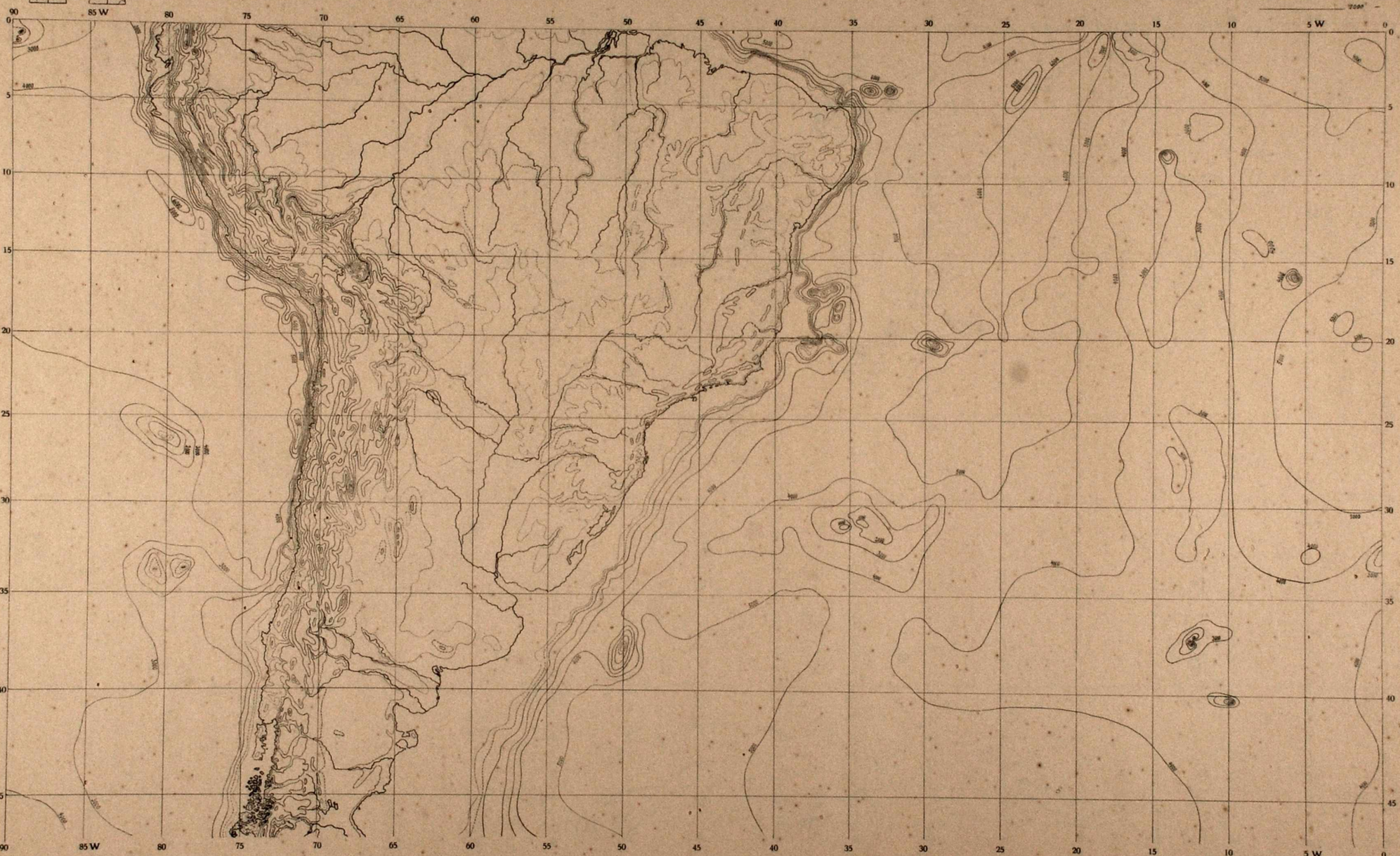
BATHYMETRIC AND HYPSOMETRIC MAP OF THE WORLD IN 24 SHEETS. SCALE 1 : 20 000 000.

SHEET 14.



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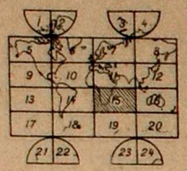

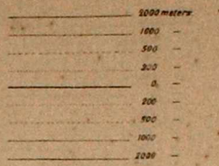

PLATE XV.

BATHYMETRIC AND HYPSOMETRIC MAP OF THE WORLD IN 24 SHEETS. SCALE 1 : 20 000 000.

SHEET 15.

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PLATE XVI.

BATHYMETRIC AND HYPSOMETRIC MAP OF THE WORLD IN 24 SHEETS. SCALE 1 : 20 000 000.

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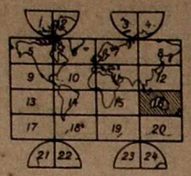

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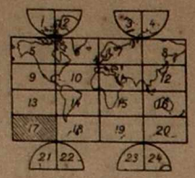

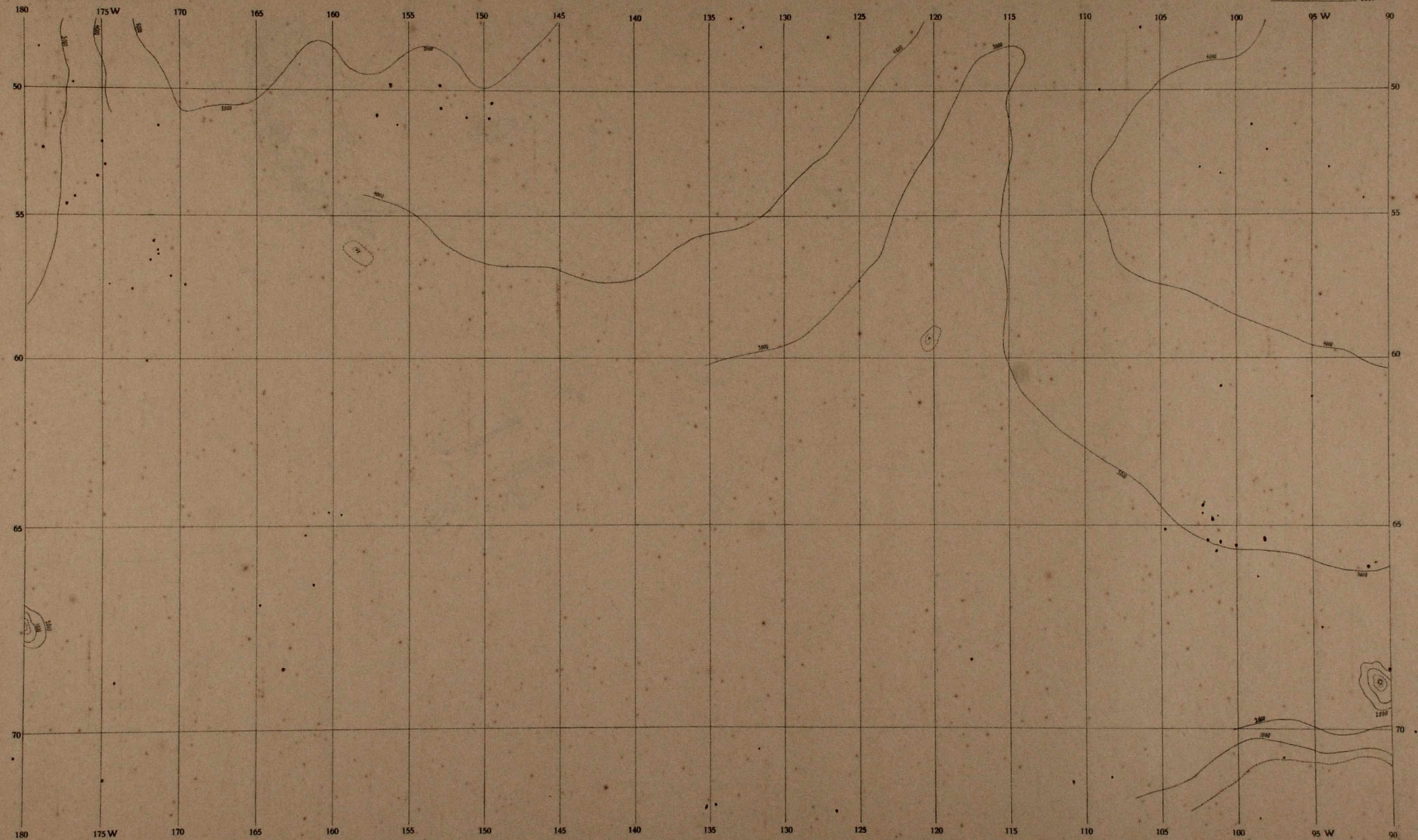

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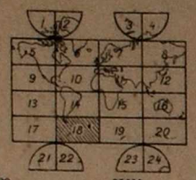
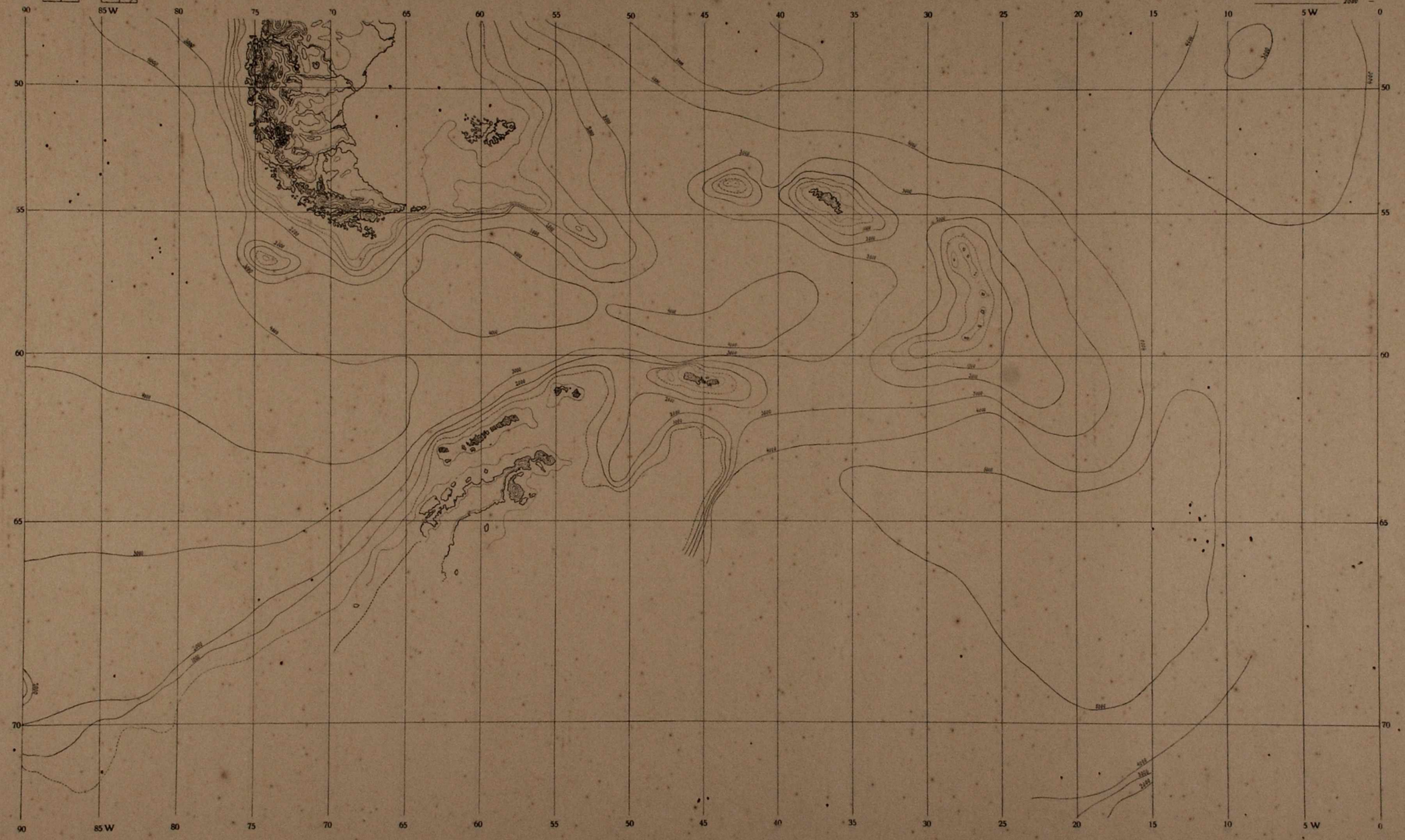
PLATE XVIII.

BATHYMETRIC AND HYPSOMETRIC MAP OF THE WORLD IN 24 SHEETS. SCALE 1 : 20 000 000.

SHEET 18.





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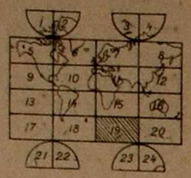

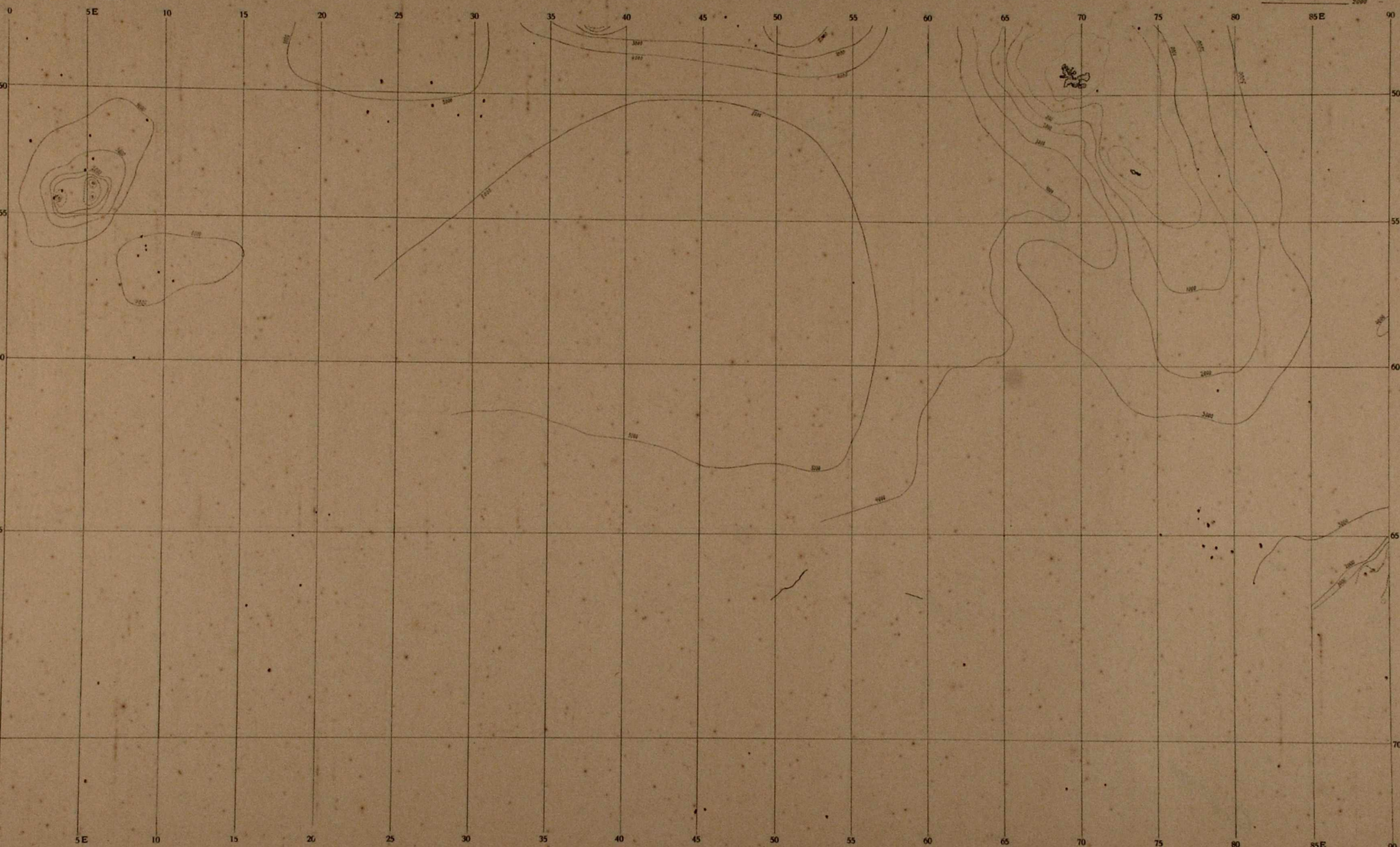

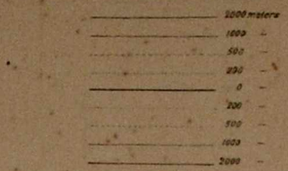

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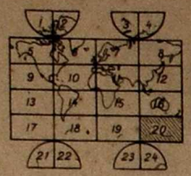
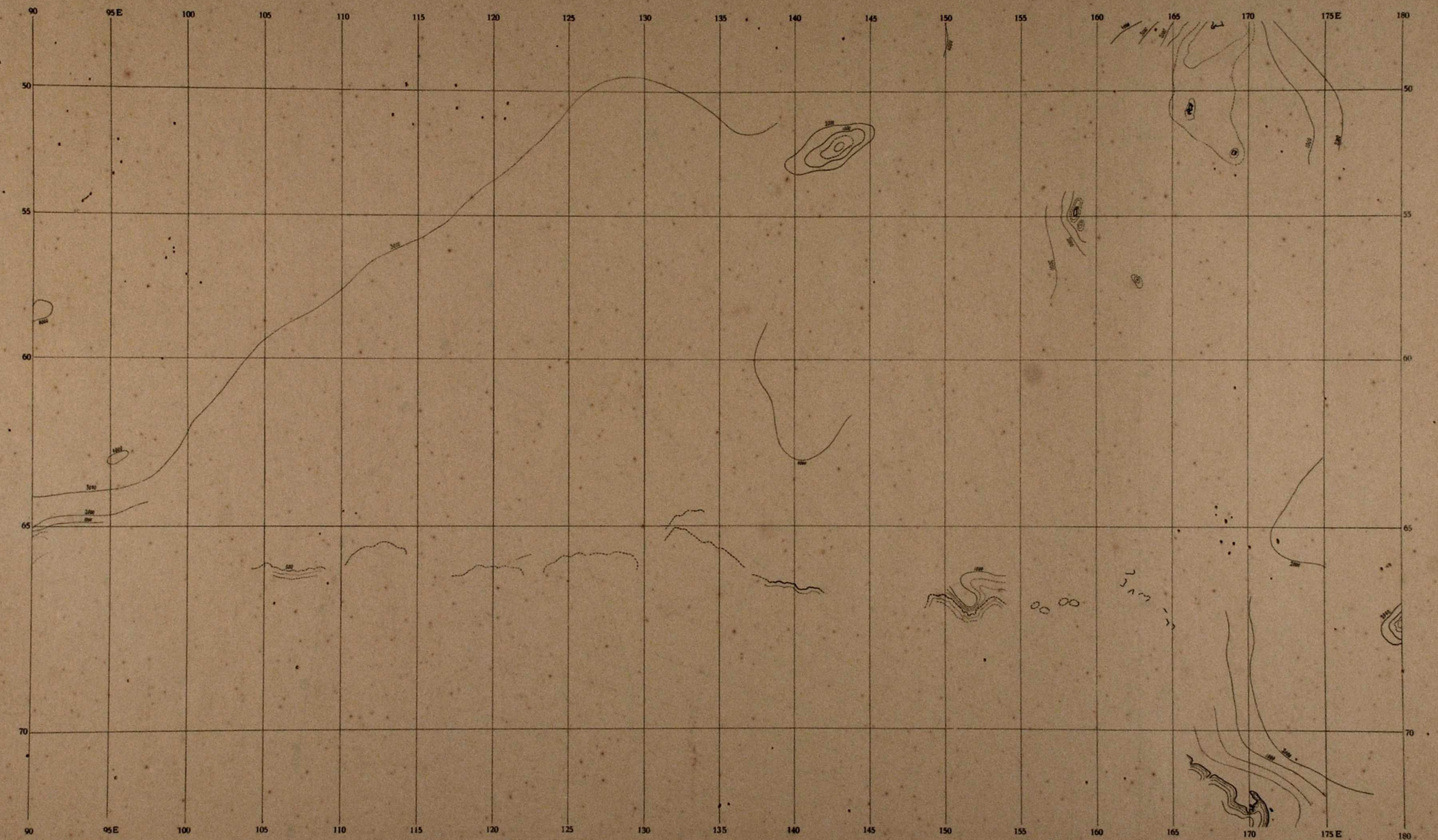


PLATE XX.

BATHYMETRIC AND HYPSOMETRIC MAP OF THE WORLD IN 24 SHEETS. SCALE 1 : 20 000 000.

SHEET 20.



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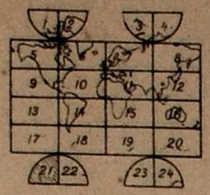
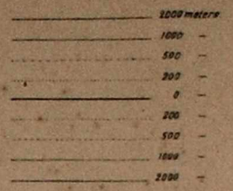


PLATE XXI.

BATHYMETRIC AND HYPSOMETRIC MAP OF THE WORLD IN 24 SHEETS. SCALE 1 : 20 000 000.

SHEET 21.



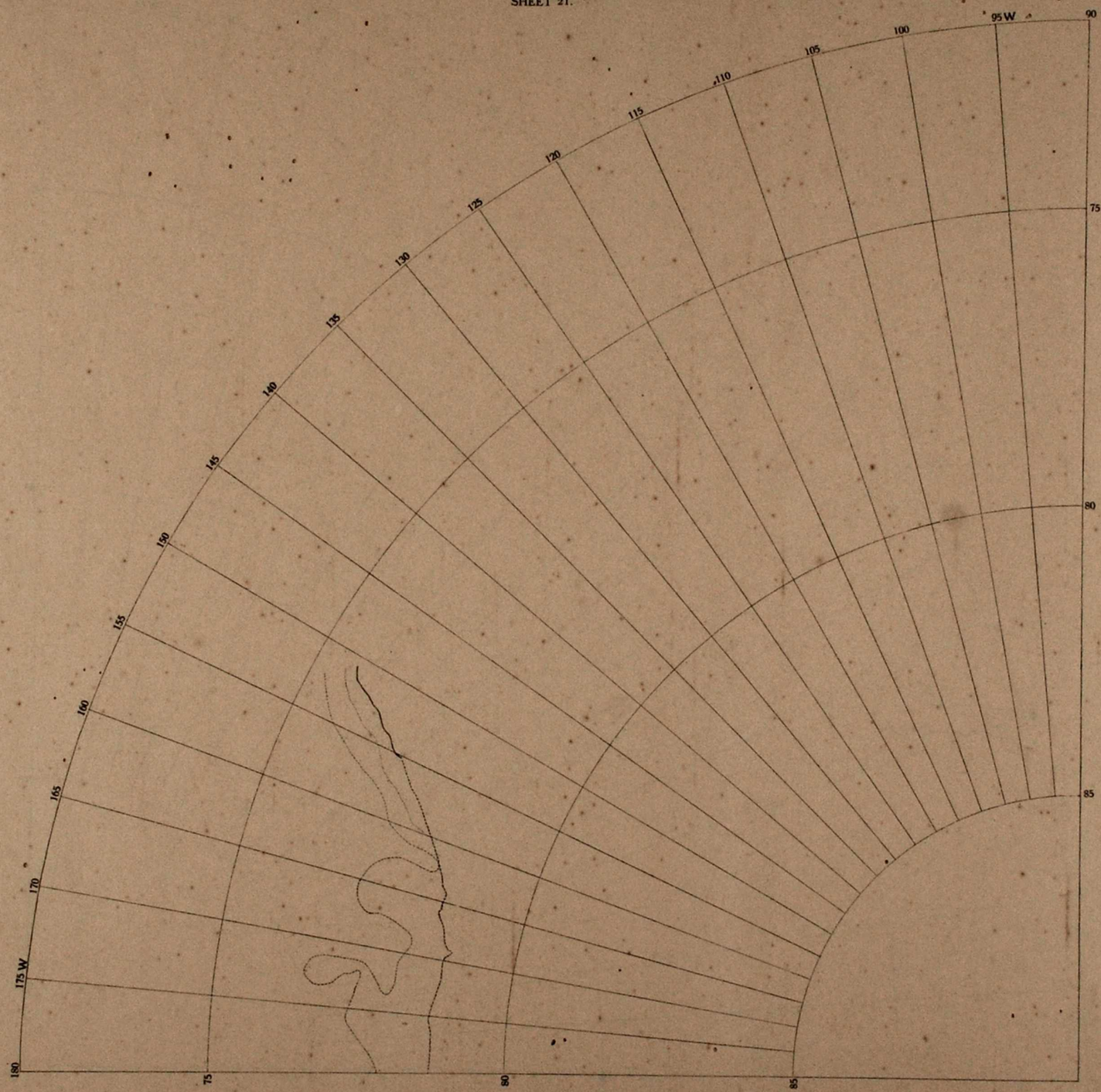


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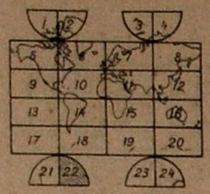
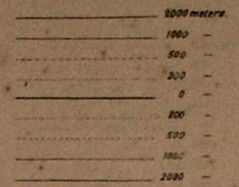
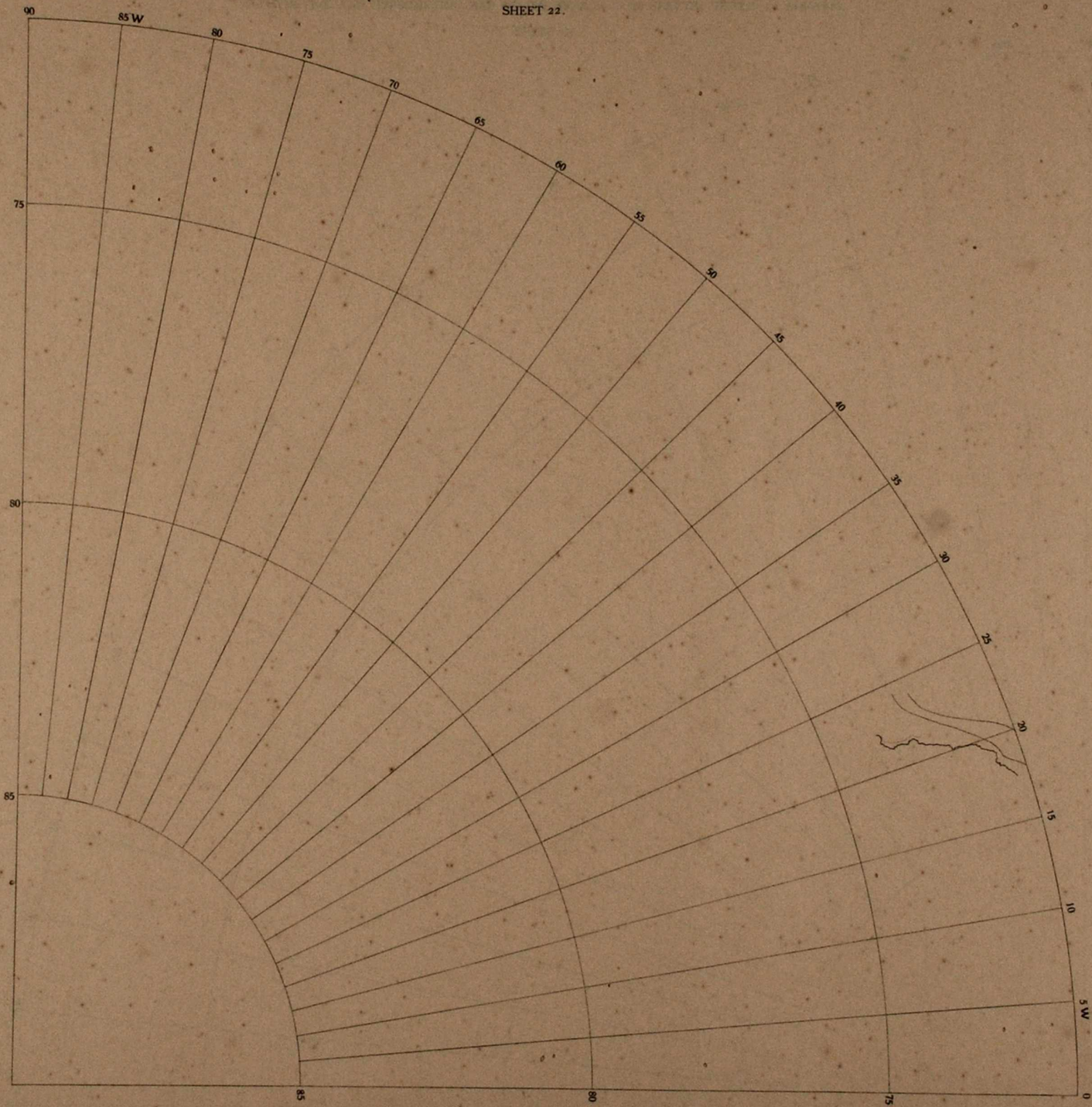
PLATE XXII.

BATHYMETRIC AND HYPSOMETRIC MAP OF THE WORLD IN 24 SHEETS. SCALE 1 : 20 000 000.

SHEET 22.







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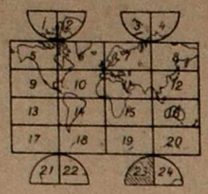

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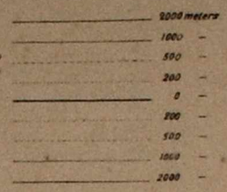
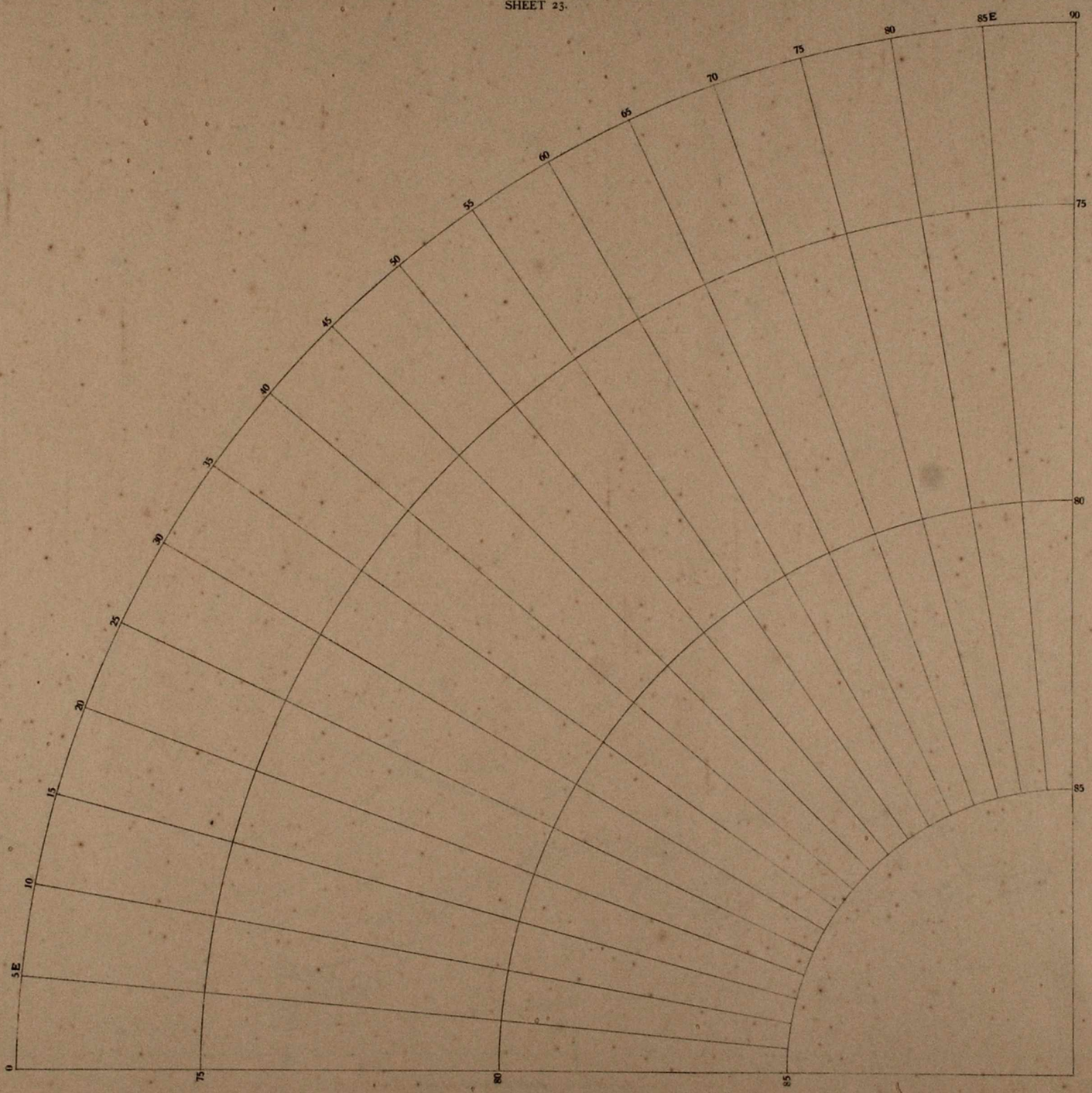
BATHYMETRIC AND HYPSOMETRIC MAP OF THE WORLD IN 24 SHEETS. SCALE 1 : 20 000 000.

SHEET 23.





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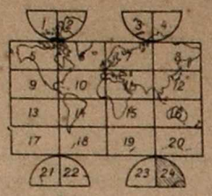

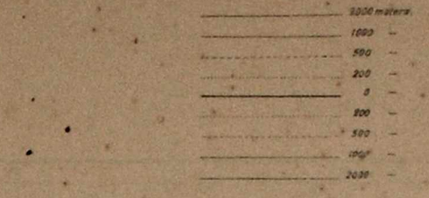

PLATE XXIV.

BATHYMETRIC AND HYPSOMETRIC MAP OF THE WORLD IN 24 SHEETS. SCALE 1 : 20 000 000.

SHEET 24.

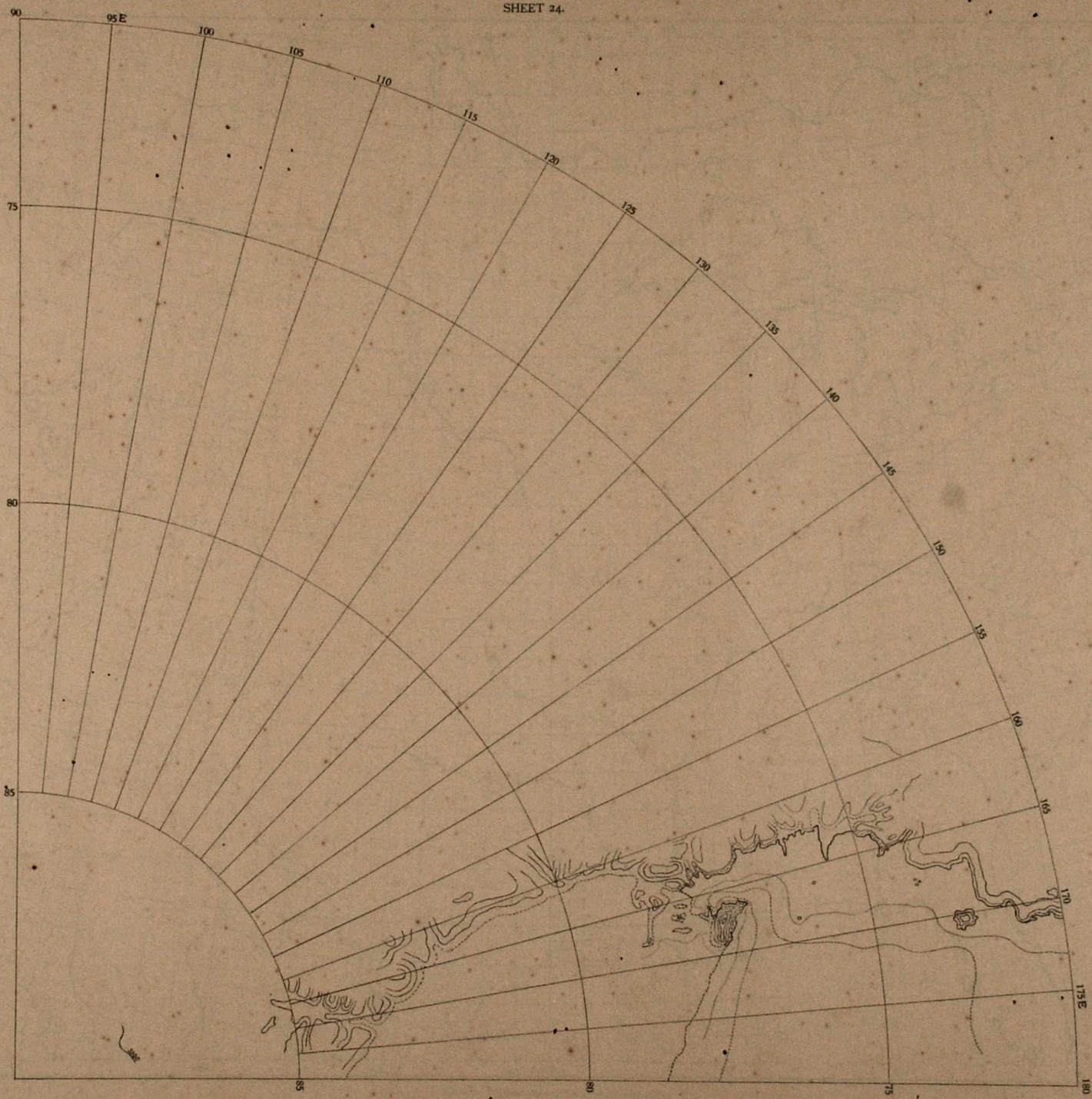

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PLATE XXV

MODERATELY IDEALIZED TOPOGRAPHY. SCALE 1 : 10 000 000

UNITED STATES OF AMERICA

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PLATE XXVI

GREATLY IDEALIZED TOPOGRAPHY. SCALE 1 : 10 000 000

UNITED STATES OF AMERICA

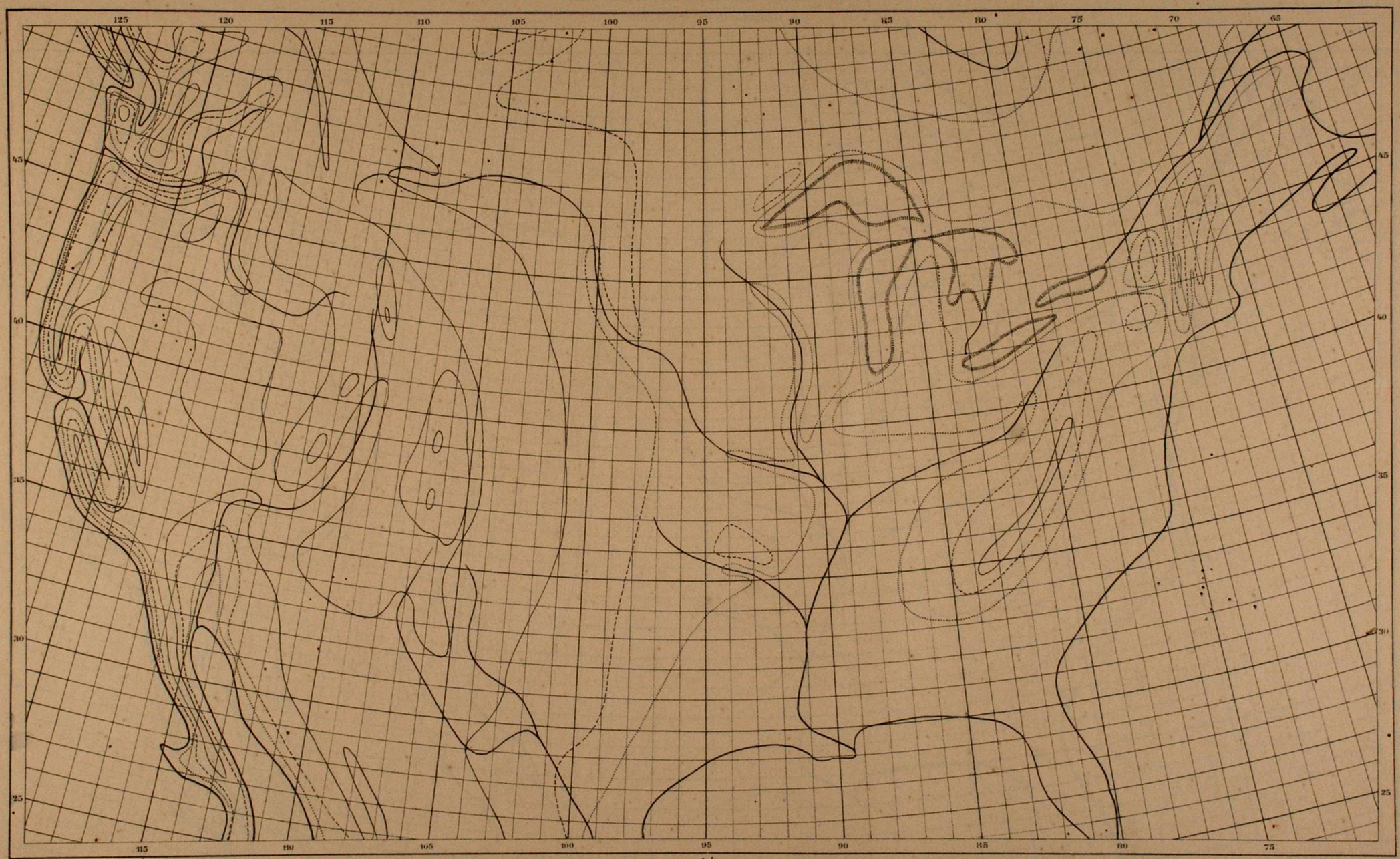

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PLATE XXVII

AVERAGE PRESSURE AT THE GROUND. SCALE 1 : 10 000 000

UNITED STATES OF AMERICA

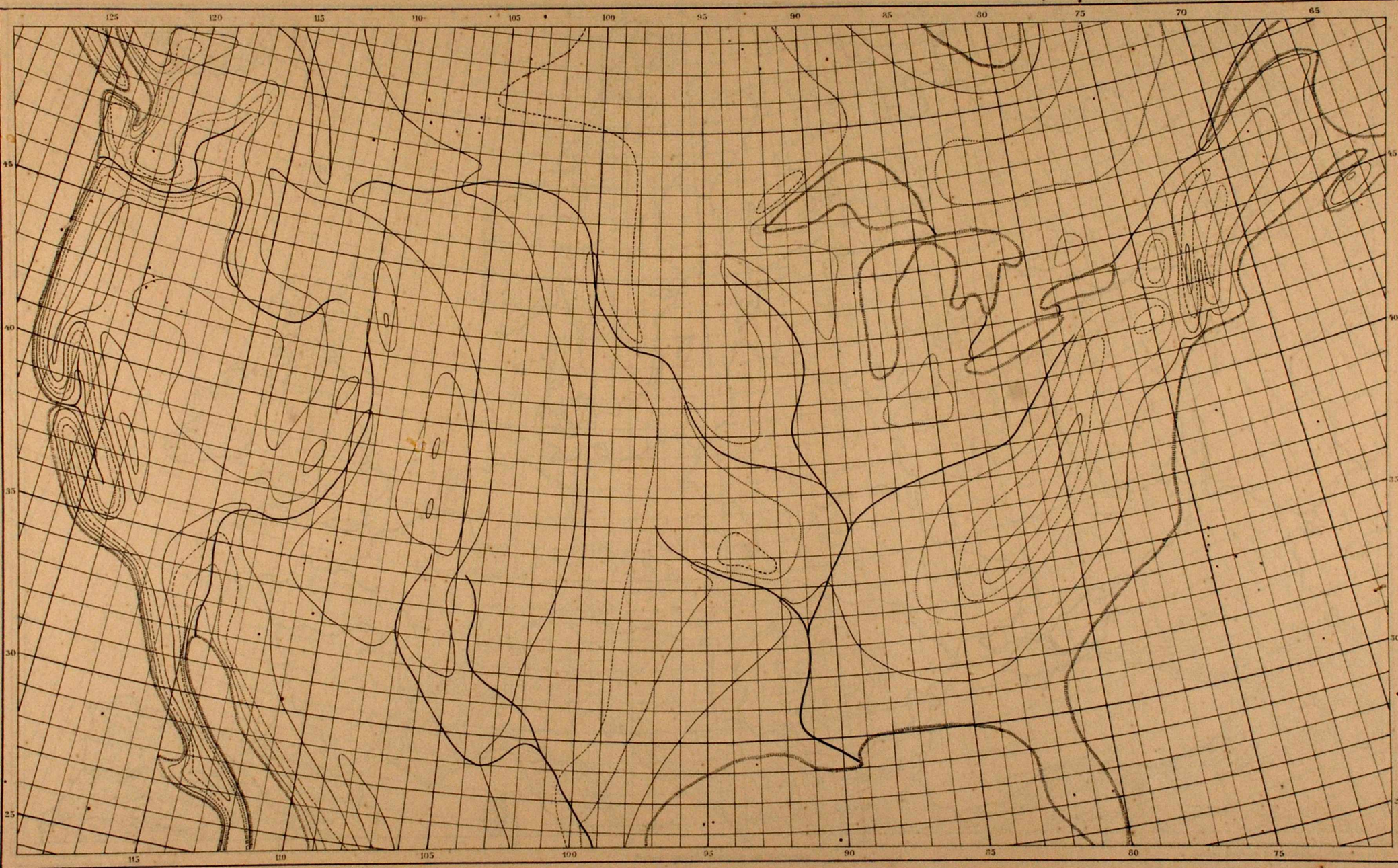

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PLATE XXVIII

MODERATELY IDEALIZED TOPOGRAPHY. SCALE 1 : 10 000 000

EUROPE

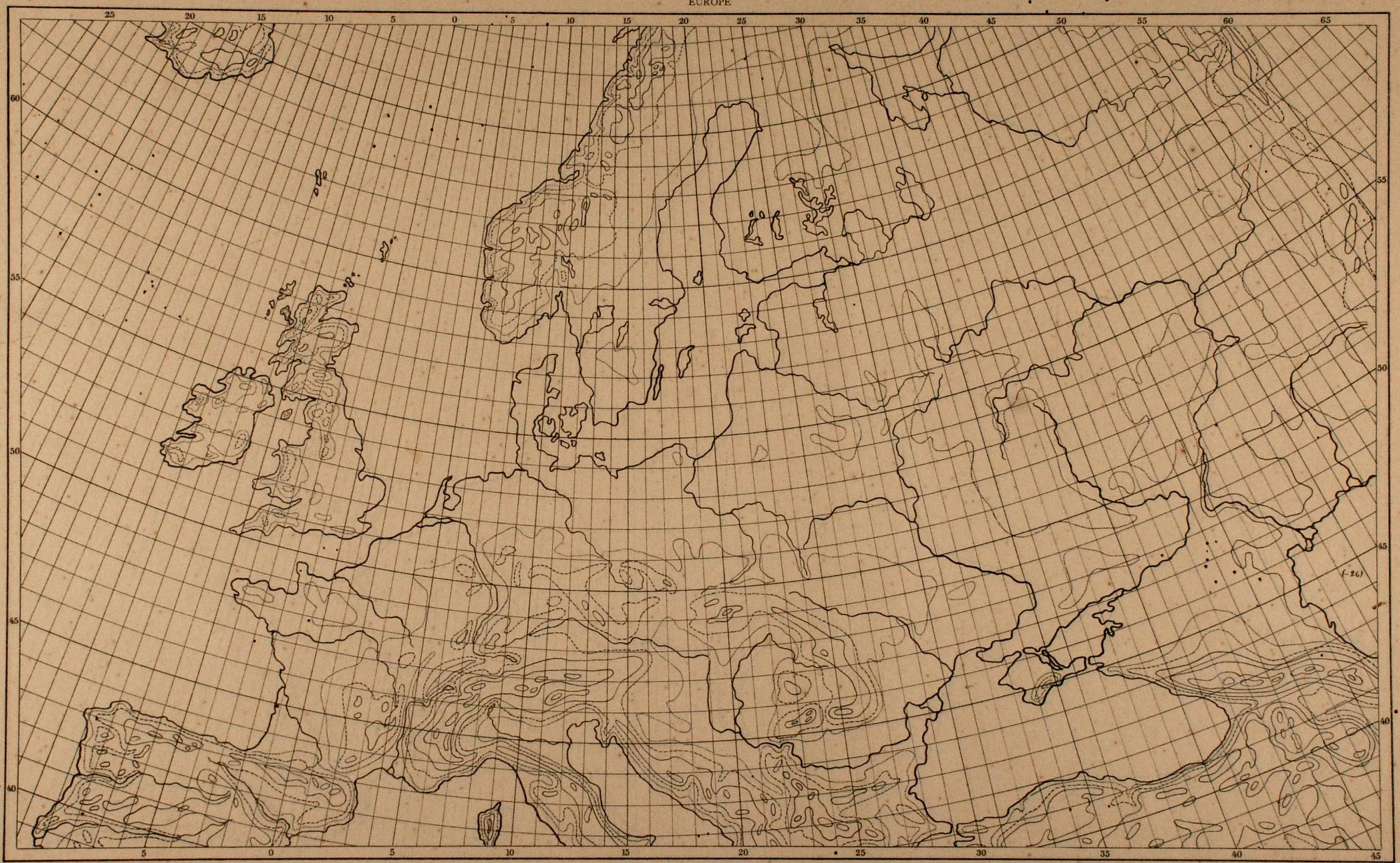

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PLATE XXIX

GREATLY IDEALIZED TOPOGRAPHY. SCALE 1 : 10 000 000

EUROPE

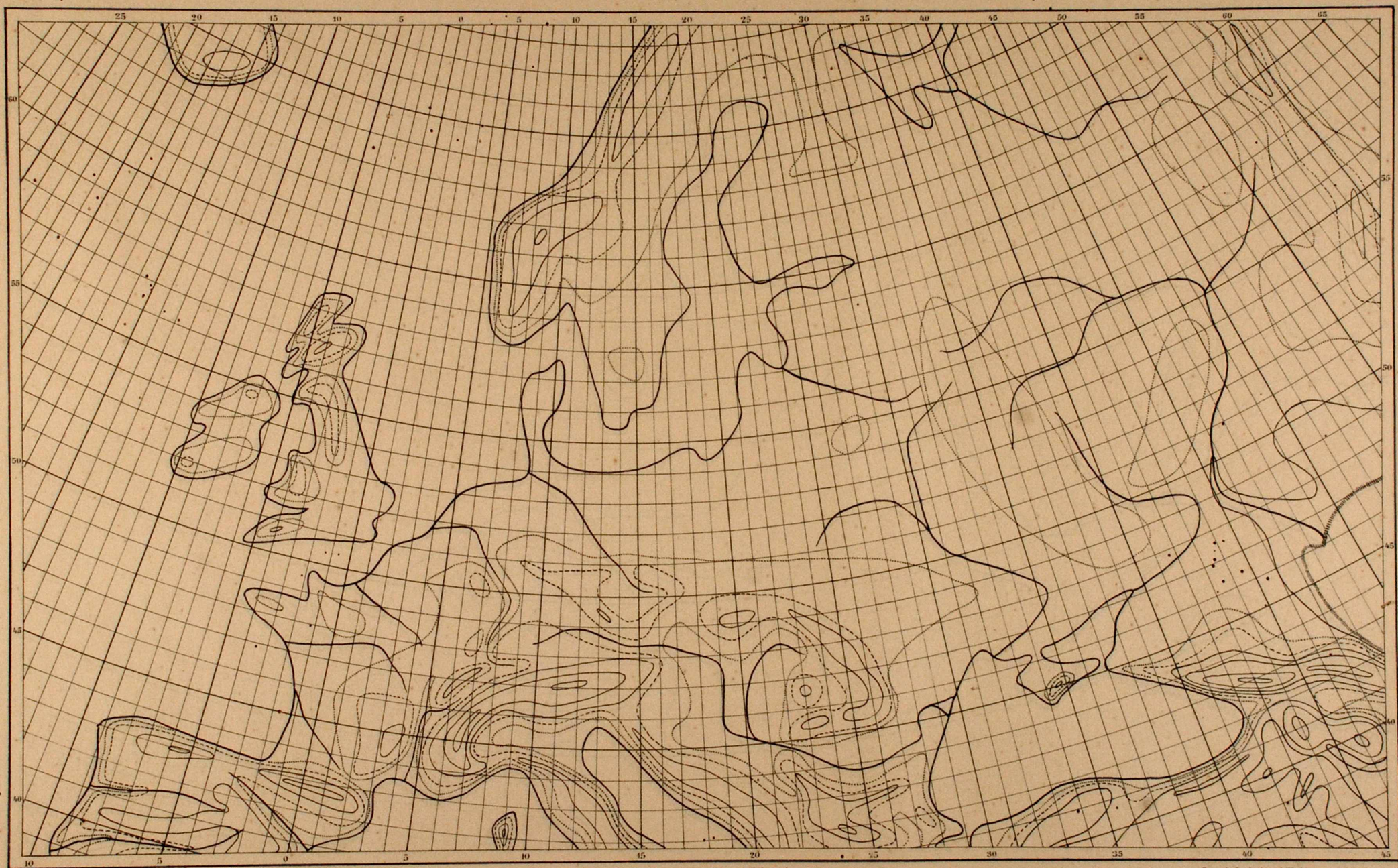

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PLATE XXX

AVERAGE PRESSURE AT THE GROUND. SCALE 1 : 10 000 000

EUROPE

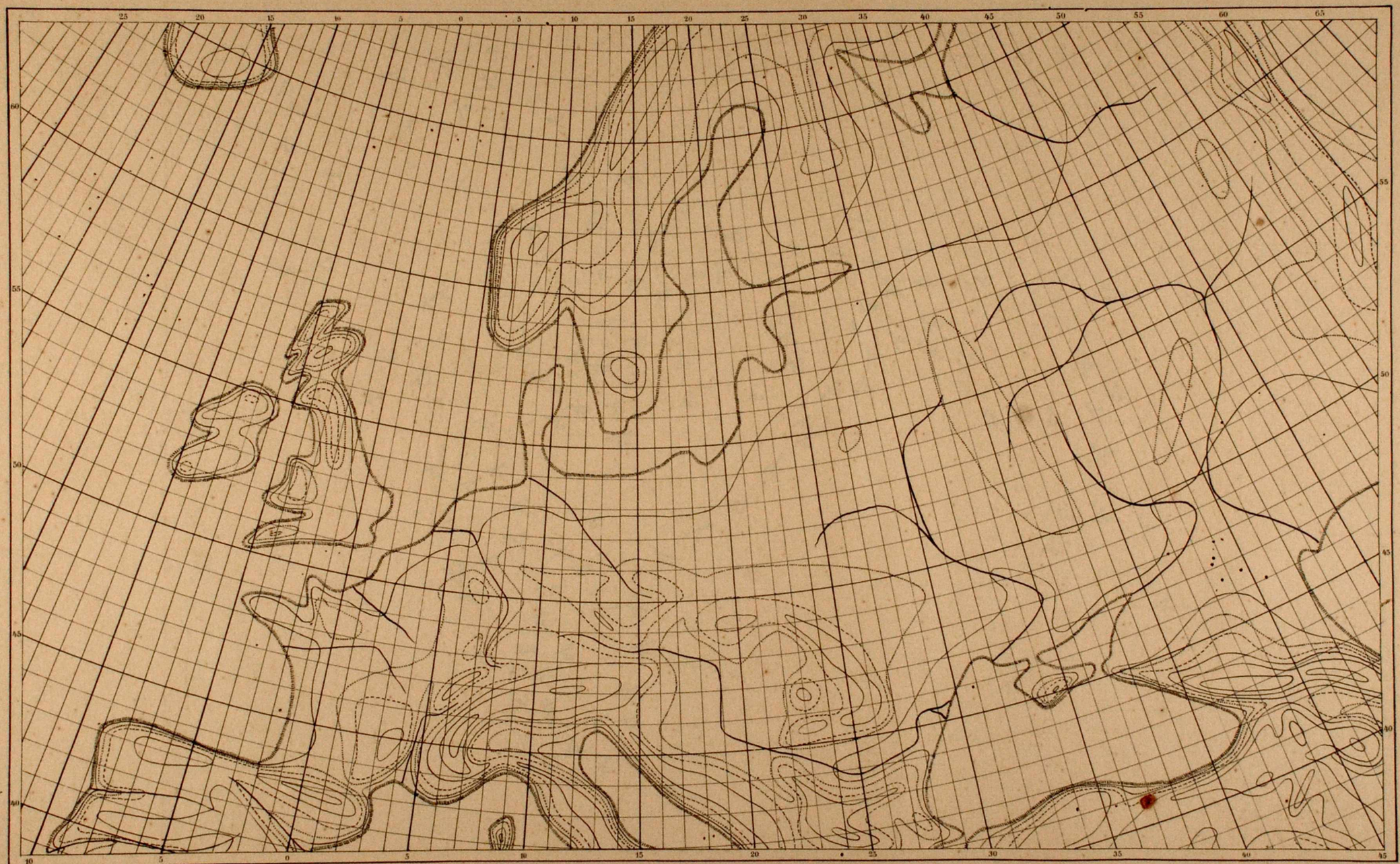

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PLATE XXXI

ARROWS REPRESENTING WIND-DIRECTION AND NUMBERS REPRESENTING WIND-INTENSITY (M/SEC.)

INDIA, JULY

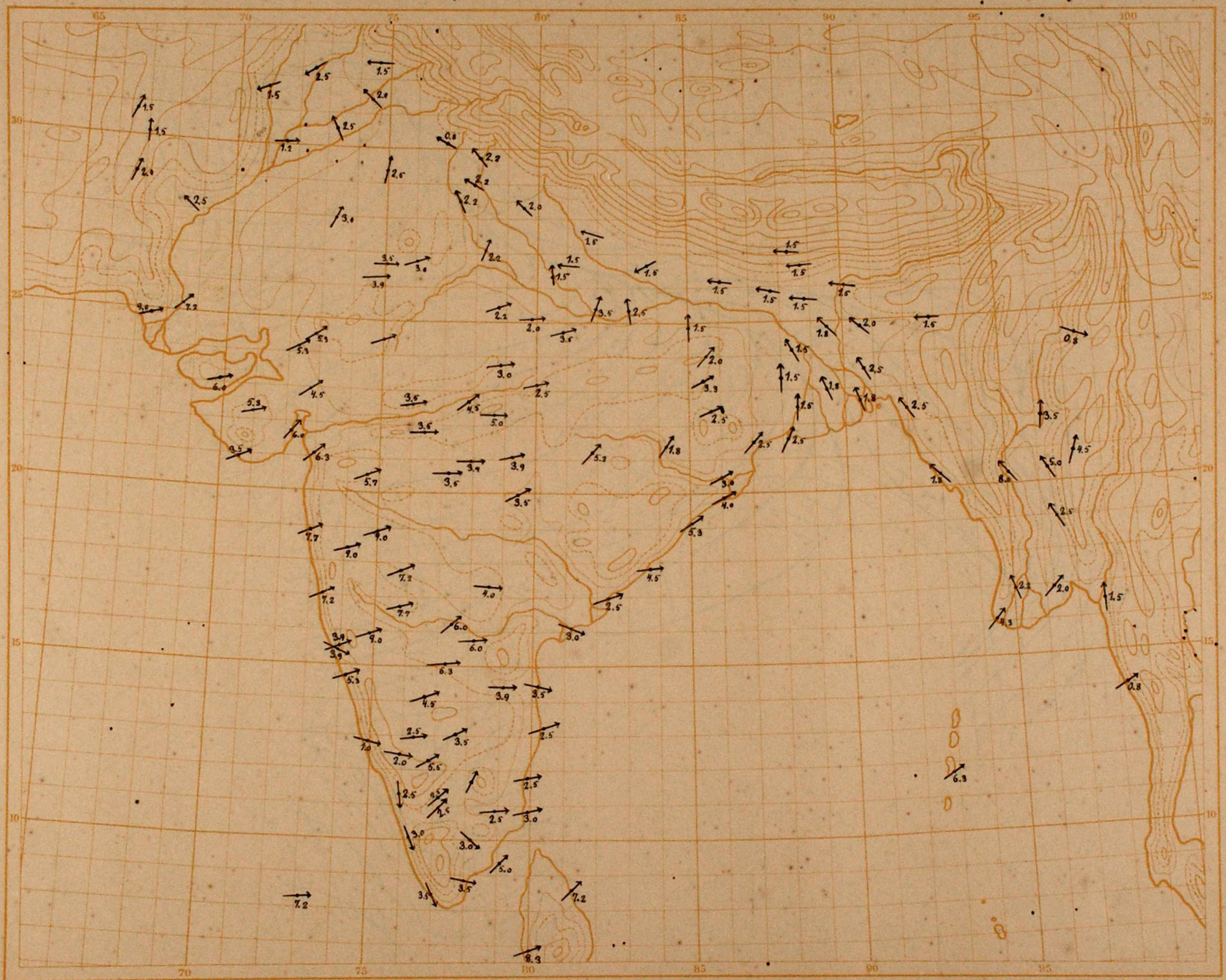

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PLATE XXXII

LINES OF FLOW AND CURVES OF EQUAL WIND-INTENSITY (M/SEC.)

INDIA, JULY

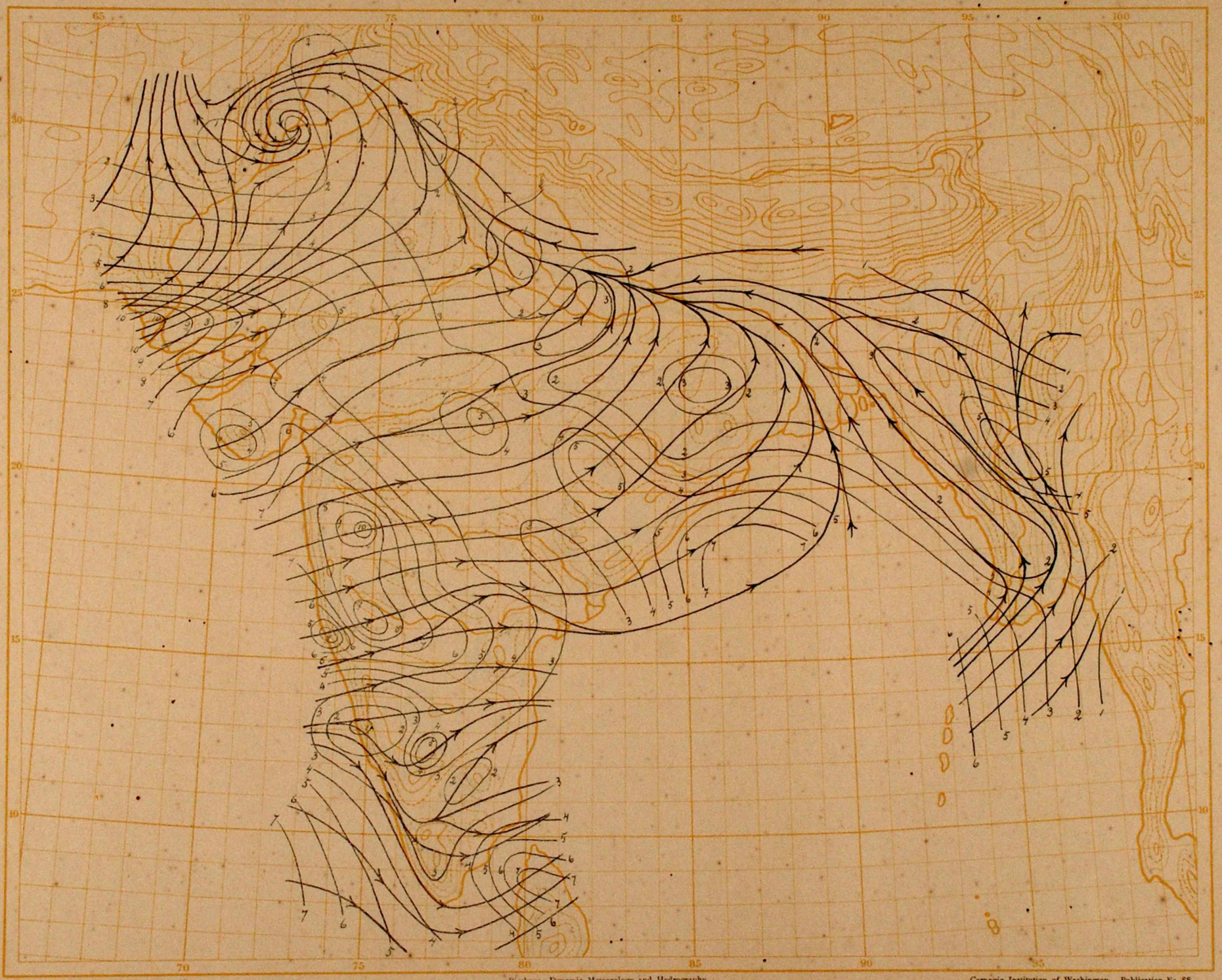

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PLATE XXXIII

FORCED VERTICAL VELOCITY AT THE GROUND (CM/SEC.)

(Areas of ascending motion shaded, of descending motion unshaded)

INDIA, JULY

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PLATE XXXIV

FREE VERTICAL MOTION

(Areas of ascending motion shaded, of descending motion unshaded)

(The numbers give vertical velocity in mm/sec. at the height of 100, in cm/sec. at the height of 1000 meters above the ground; or they give vertical sp. momentum in gr/m² sec. at the height where the pressure is 10 m-bar smaller than at the ground, and in ten times this unit at the height where the pressure is 100 m-bar smaller than at the ground.)

INDIA, JULY

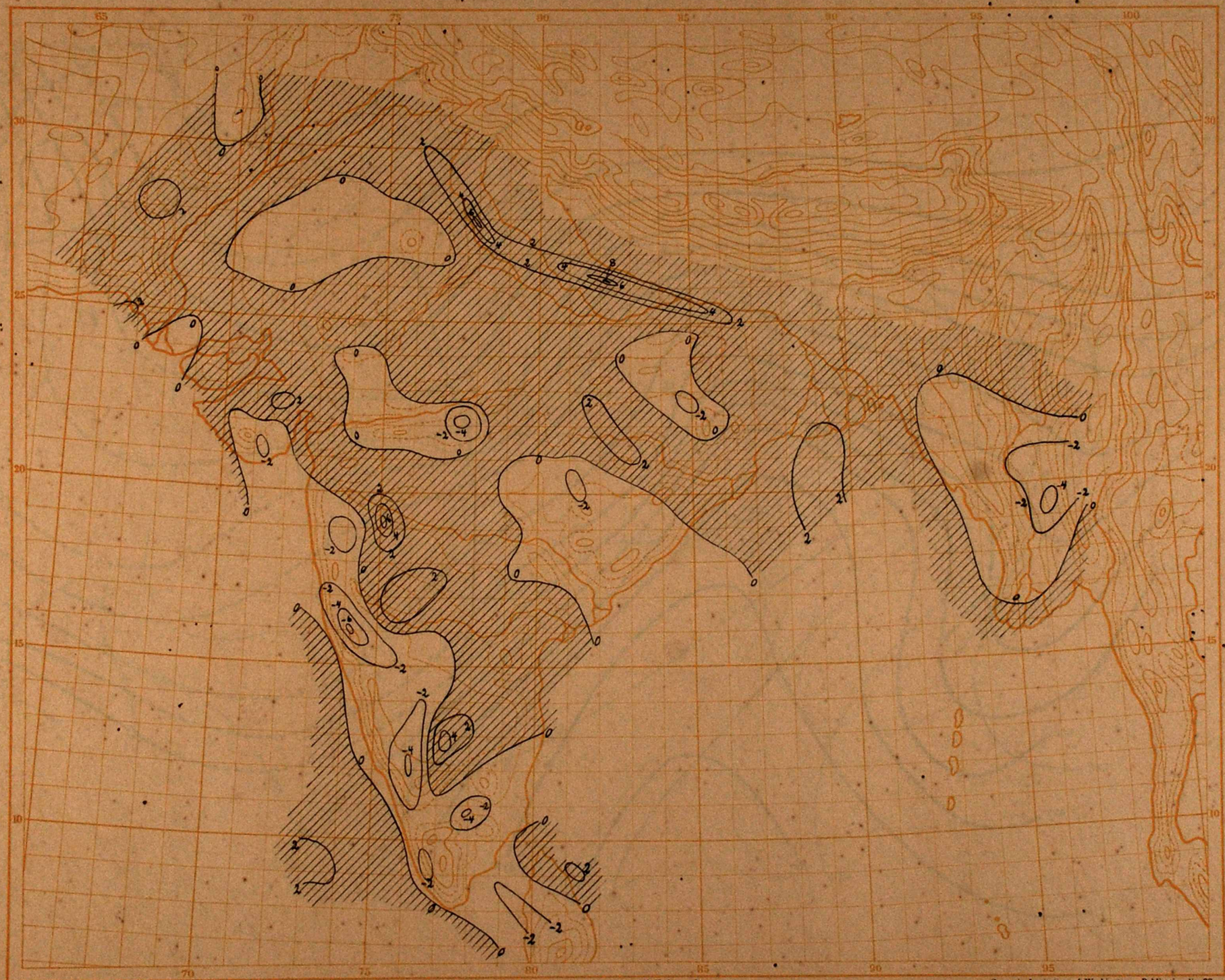

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PLATE XXXV

SINGLE LINES REPRESENTING HEIGHT OF 1000 M-BAR SURFACE ABOVE SEA-LEVEL (DYNAMIC METERS)

(Stippled where the 1000 m-bar surface is below the ground)

DOUBLE LINES REPRESENTING HEIGHT OF 900 M-BAR SURFACE ABOVE 1000 M-BAR SURFACE (DYNAMIC METERS)

(Stippled where the 900 m-bar surface is below the ground)

U. S. A. 1905, NOV. 28, 8 A. M. 75TH MERIDIAN TIME

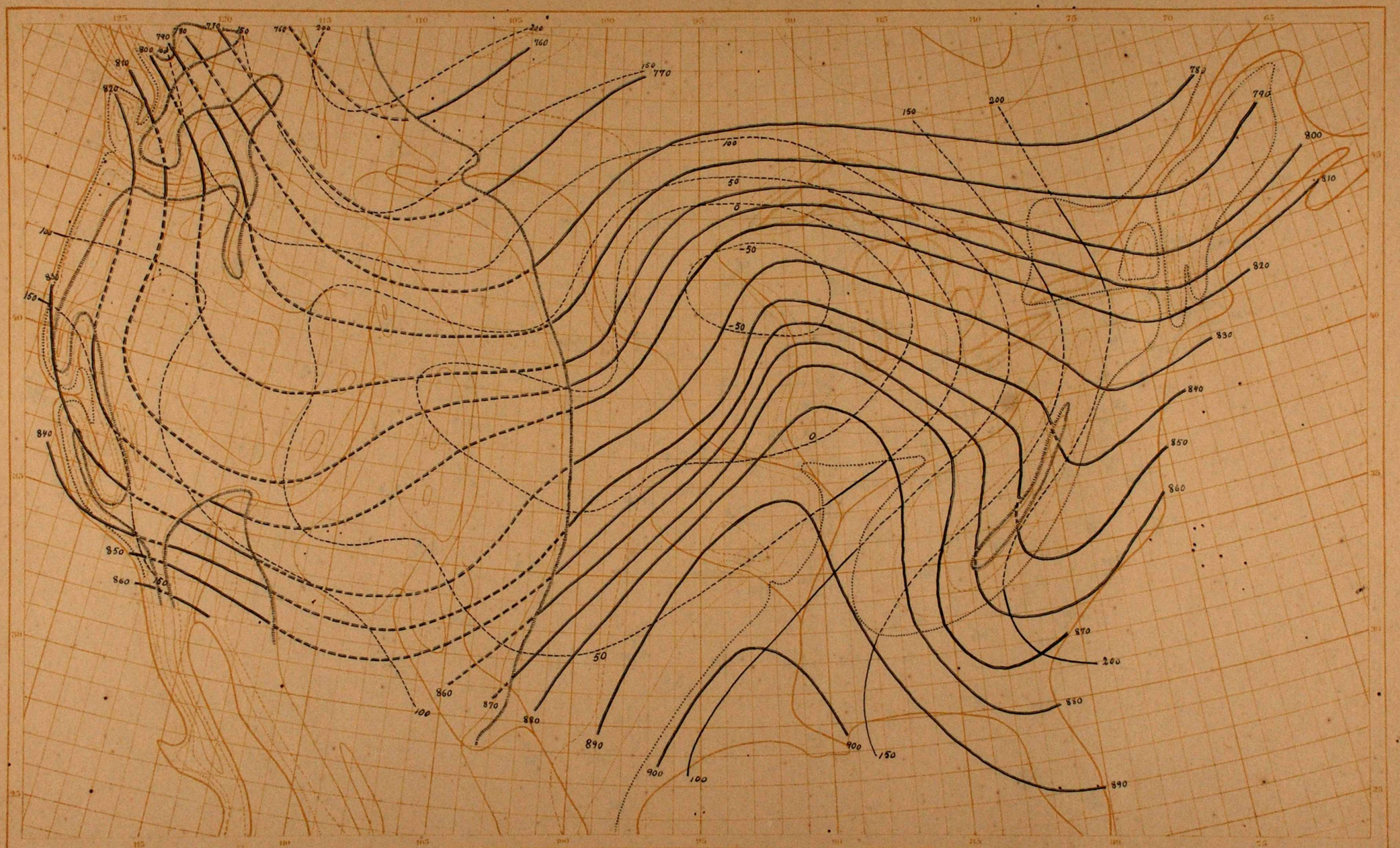

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PLATE XXXVI

ARROWS AND NUMBERS (HEAVY) REPRESENTING WIND-DIRECTION.

NUMBERS (ORDINARY TYPE) REPRESENTING WIND-INTENSITY (M/SEC.)

U. S. A. 1905, NOV. 28, 8 A. M. 75TH MERIDIAN TIME

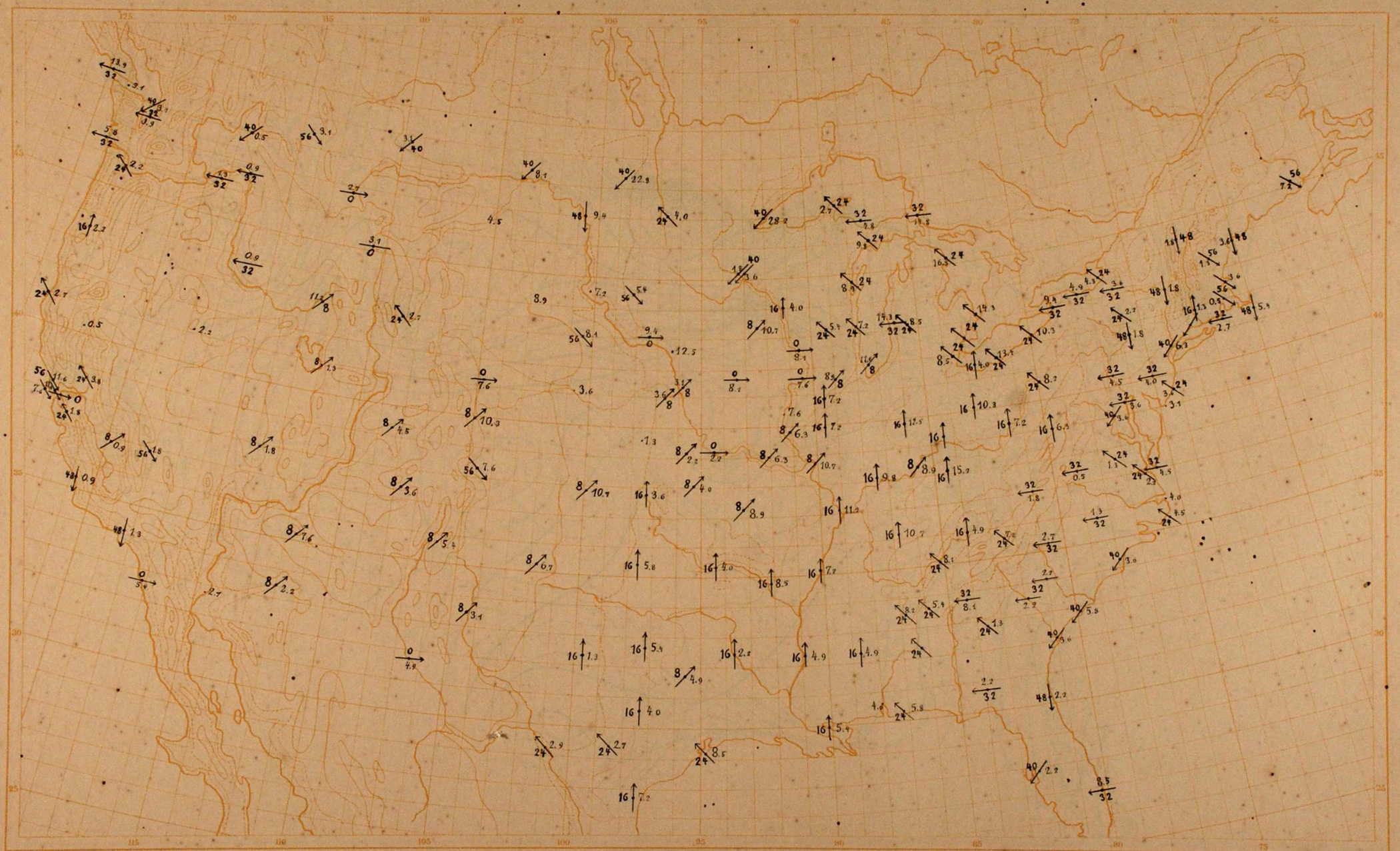

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PLATE XXXVII

ISOGONS AND CURVES OF EQUAL WIND-INTENSITY (M/SEC.)

• U. S. A. 1905, NOV. 28, 8 A. M. 75TH MERIDIAN TIME

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PLATE XXXVIII

LINES OF FLOW AND CURVES OF EQUAL WIND-INTENSITY (M/SEC.)

U. S. A. 1905, NOV. 28, 8 A. M. 75TH MERIDIAN TIME

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PLATE XXXIX

FORCED VERTICAL VELOCITY AT THE GROUND (CM/SEC.)

(Areas of ascending motion shaded, of descending motion unshaded)

U. S. A. 1905, NOV. 28, 8 A. M. 75TH MERIDIAN TIME

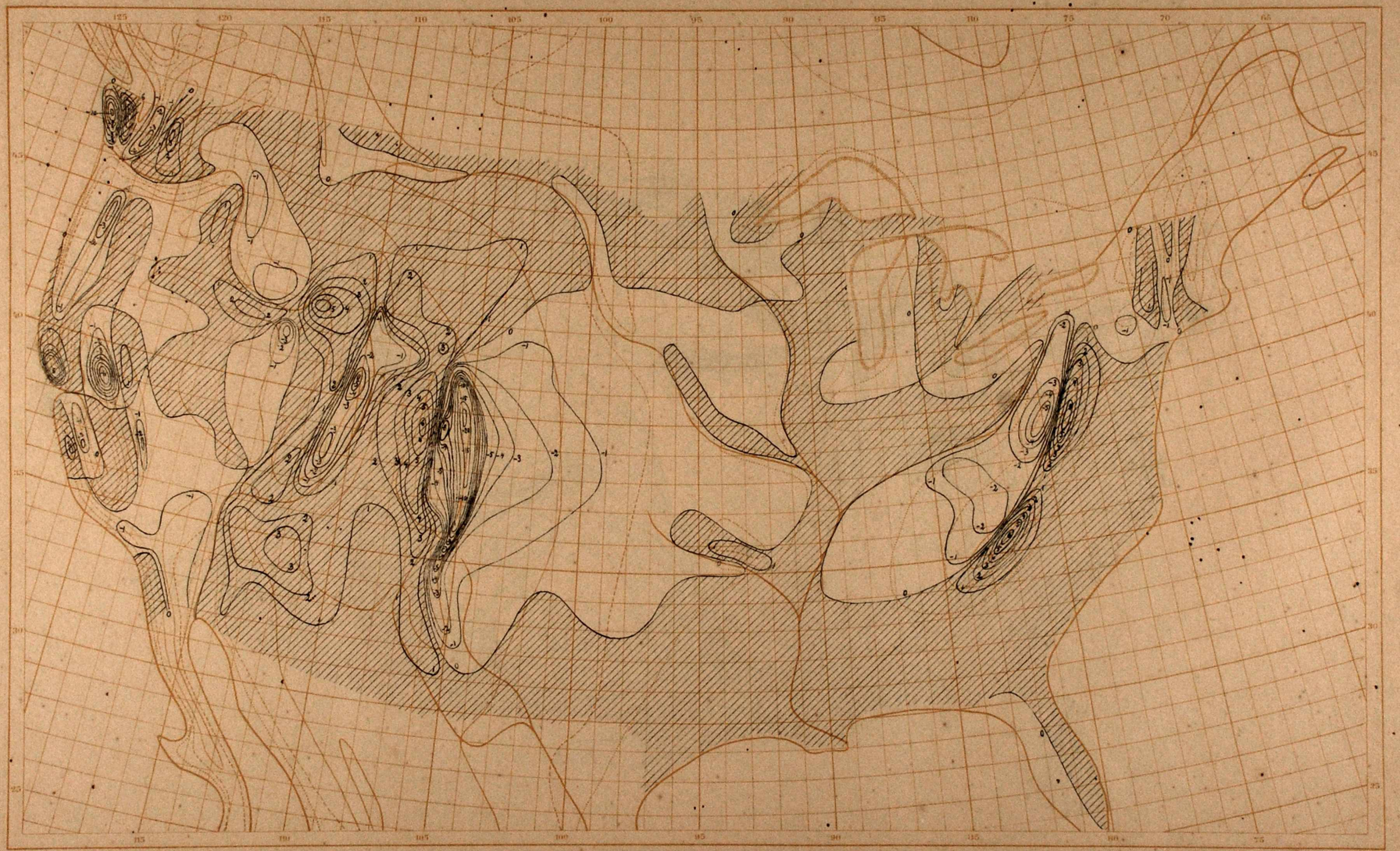

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PLATE XL

FREE VERTICAL MOTION

(Areas of ascending motion shaded, of descending motion unshaded)

(The numbers give vertical velocity in mm/sec. at the height of 100, in cm/sec. at the height of 1000 meters above the ground; or they give vertical sp. momentum in gr/m^2 sec. at the height where the pressure is 10 m-bars smaller than at the ground, and in ten times this unit at the height where the pressure is 100 m-bars smaller than at the ground.)

U. S. A. 1905, NOV. 28, 8 A. M. 75TH MERIDIAN TIME

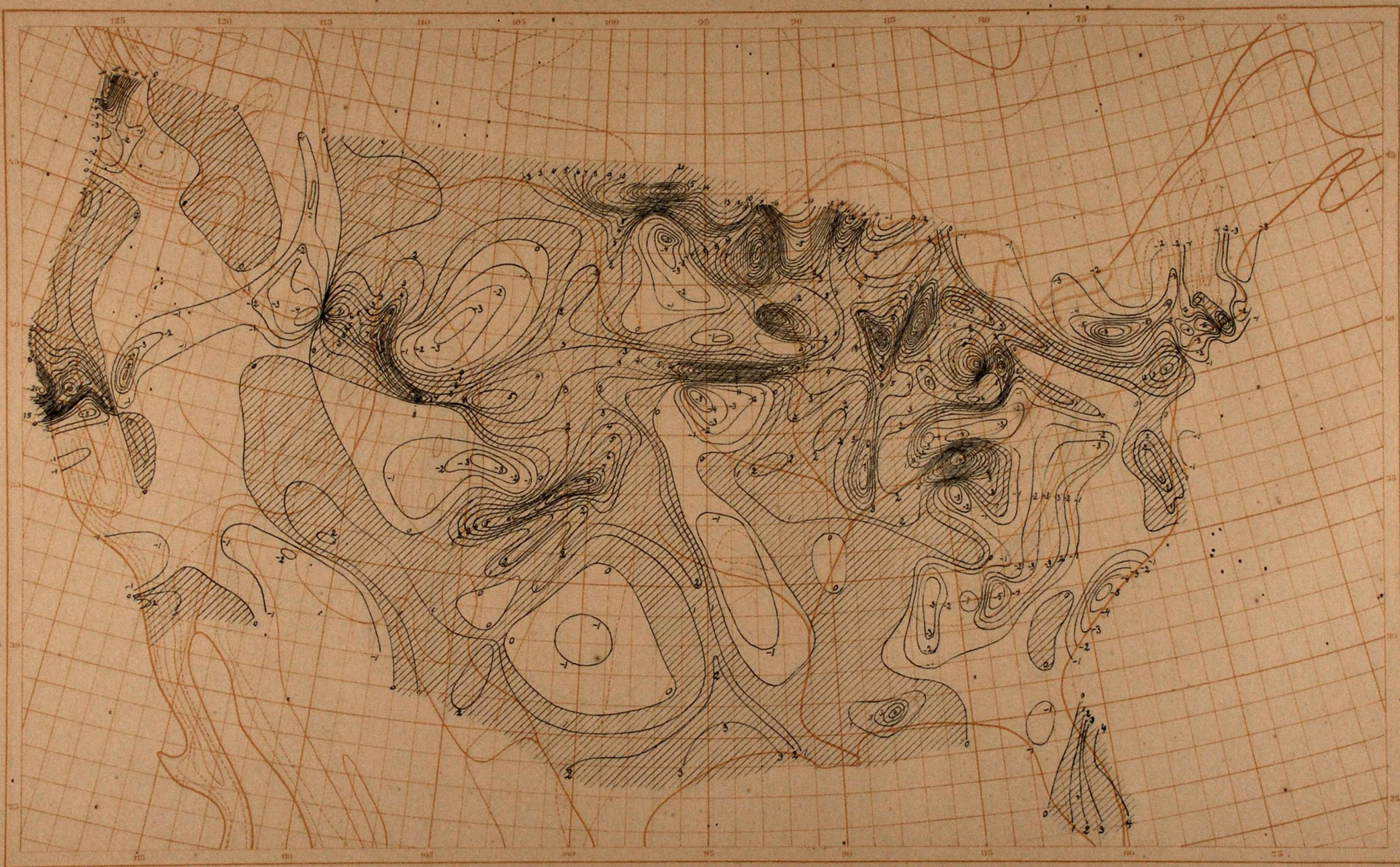

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PLATE XLI

TOTAL VERTICAL VELOCITY AT THE HEIGHT OF 1000 METERS ABOVE THE GROUND (CM/SEC.)

(Areas of ascending motion shaded, of descending motion unshaded)

U. S. A. 1905, NOV. 28, 8 A. M. 75TH MERIDIAN TIME

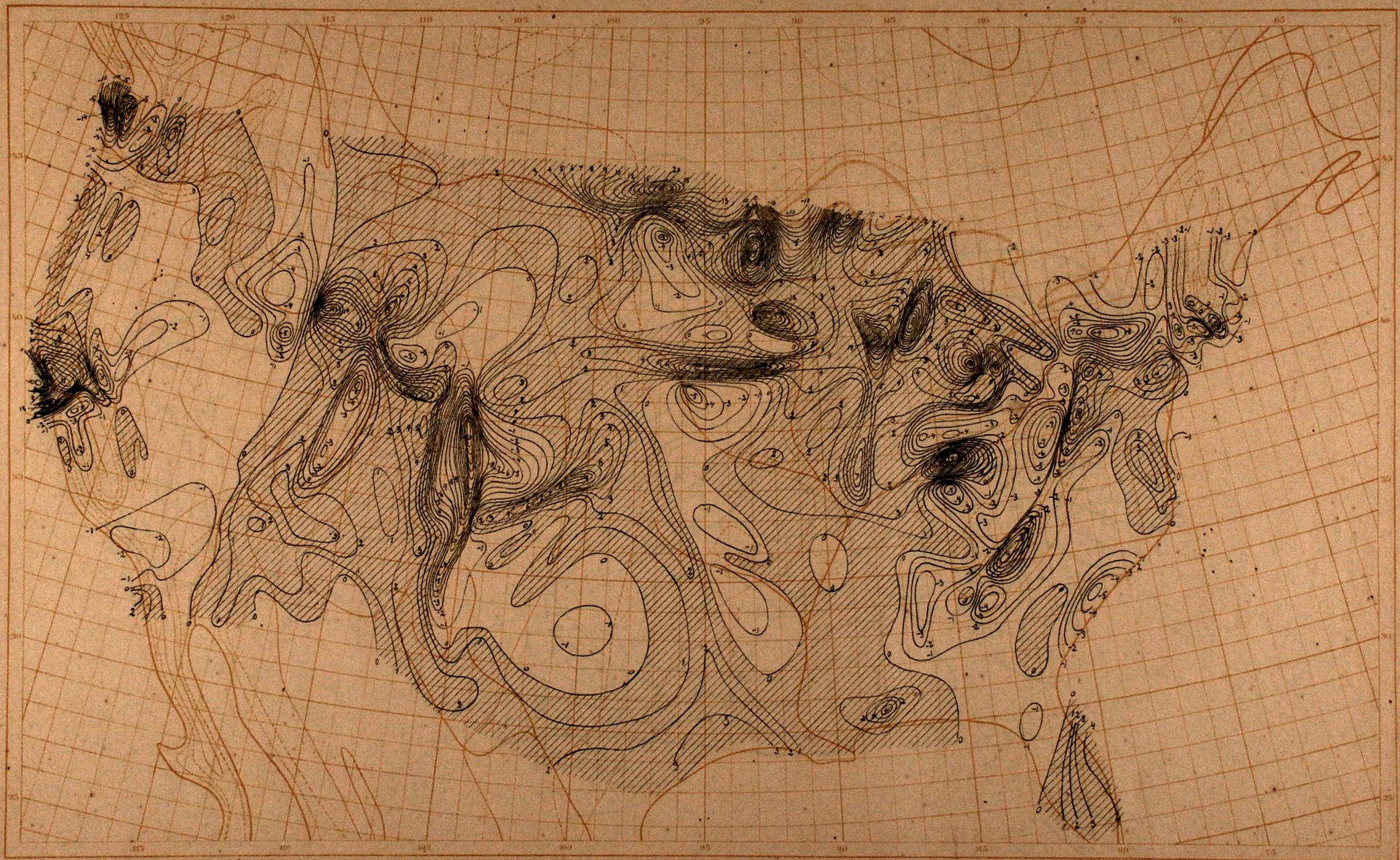

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PLATE XLII

ISOGONS AND CURVES OF EQUAL WIND-INTENSITY (M/SEC.)

U. S. A. 1905, NOV. 28, 11 A. M. 75TH MERIDIAN TIME

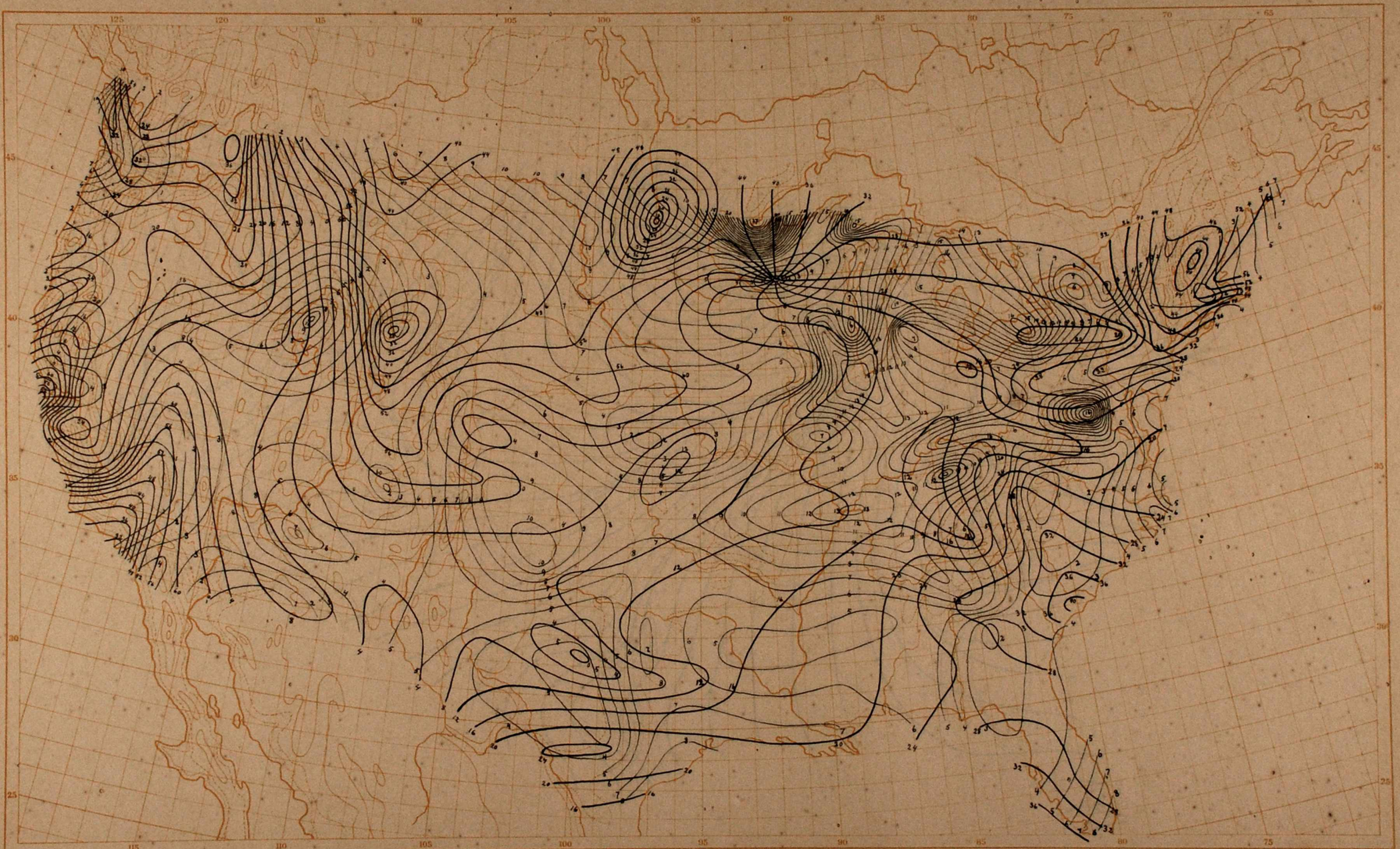

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PLATE XLIII

LINES OF FLOW AND CURVES OF EQUAL WIND-INTENSITY (M/SEC.)

U. S. A. 1905, NOV. 28, 11 A. M. 75TH MERIDIAN TIME

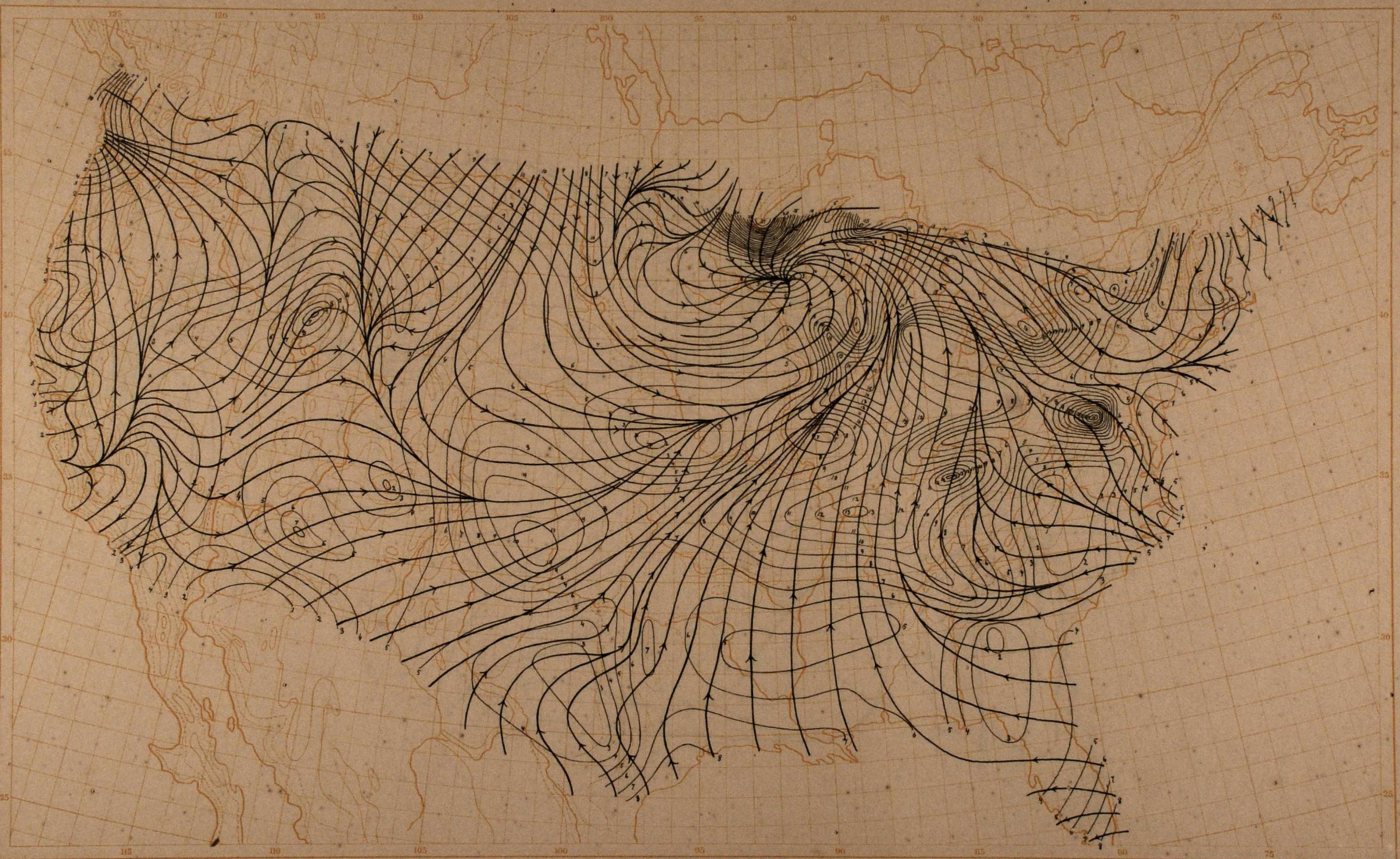

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PLATE XLIV

ISOGONS AND CURVES OF EQUAL WIND-INTENSITY (M/SEC) FOR AVERAGE AIR-MOTION

U. S. A. 1905, NOV. 28, 8—11 A. M. 75TH MERIDIAN TIME

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PLATE XLV

LINES OF FLOW AND CURVES OF EQUAL WIND-INTENSITY (M/SEC) FOR AVERAGE AIR-MOTION

U. S. A. 1905, NOV. 28, 8—11 A. M. 75TH MERIDIAN TIME

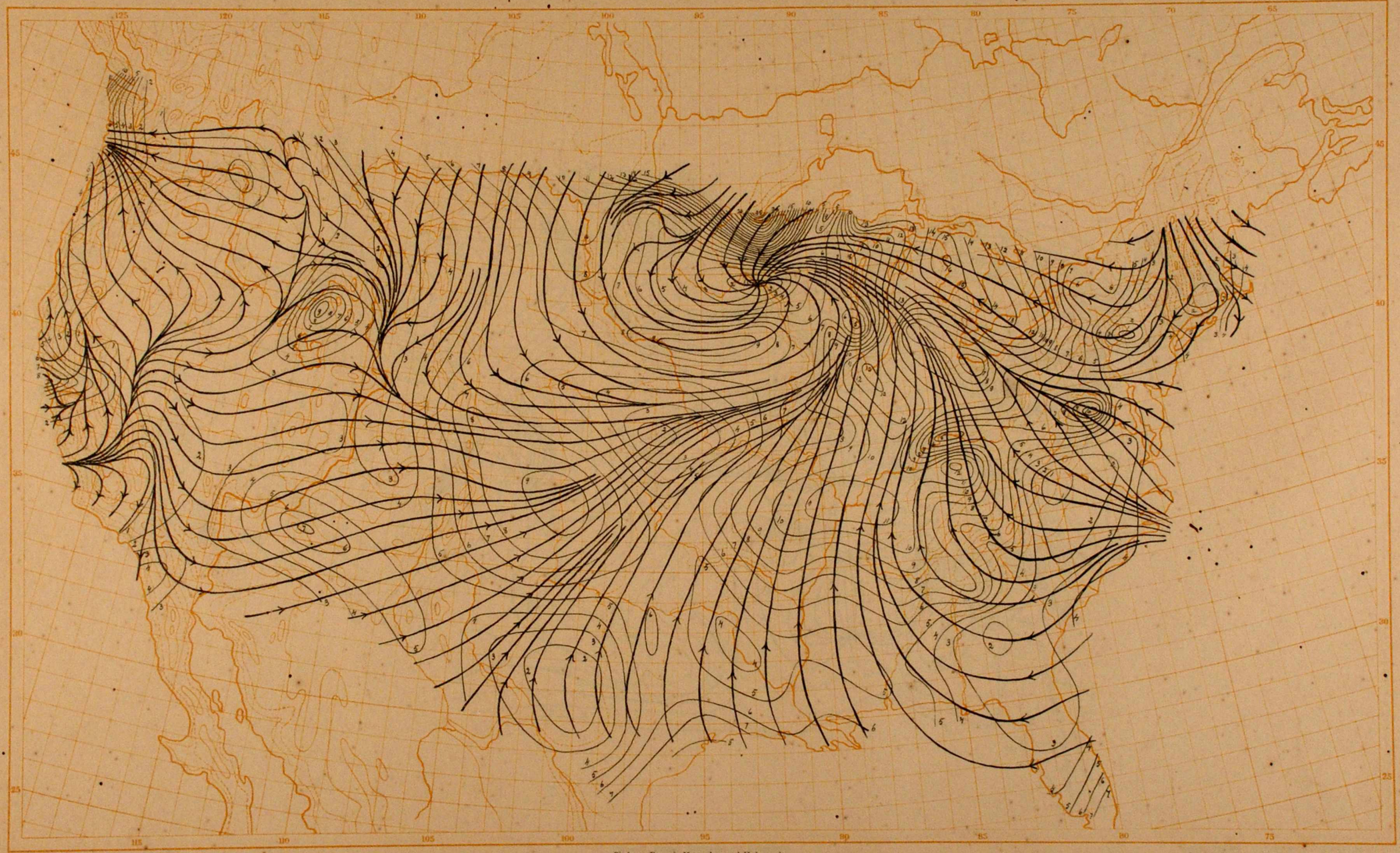

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PLATE XLVI

LOCAL ACCELERATION REPRESENTED BY ISOGONS AND CURVES OF EQUAL INTENSITY (10^{-4} M/SEC.^{2})

U. S. A. 1905, NOV. 28, 8—11 A. M. 75TH MERIDIAN TIME

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PLATE XLVII

LOCAL ACCELERATION REPRESENTED BY VECTOR-LINES AND CURVES OF EQUAL INTENSITY (10^{-4} M/SEC.^{2})

U. S. A. 1905, NOV. 28, 8—11 A. M. 75TH MERIDIAN TIME

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PLATE XLVIII

STATIONARY ACCELERATION REPRESENTED BY ISOGONS AND CURVES OF EQUAL INTENSITY (10^{-4} M/SEC.^{2})

U. S. A. 1905, NOV. 28, 8—11 A. M. 75TH MERIDIAN TIME

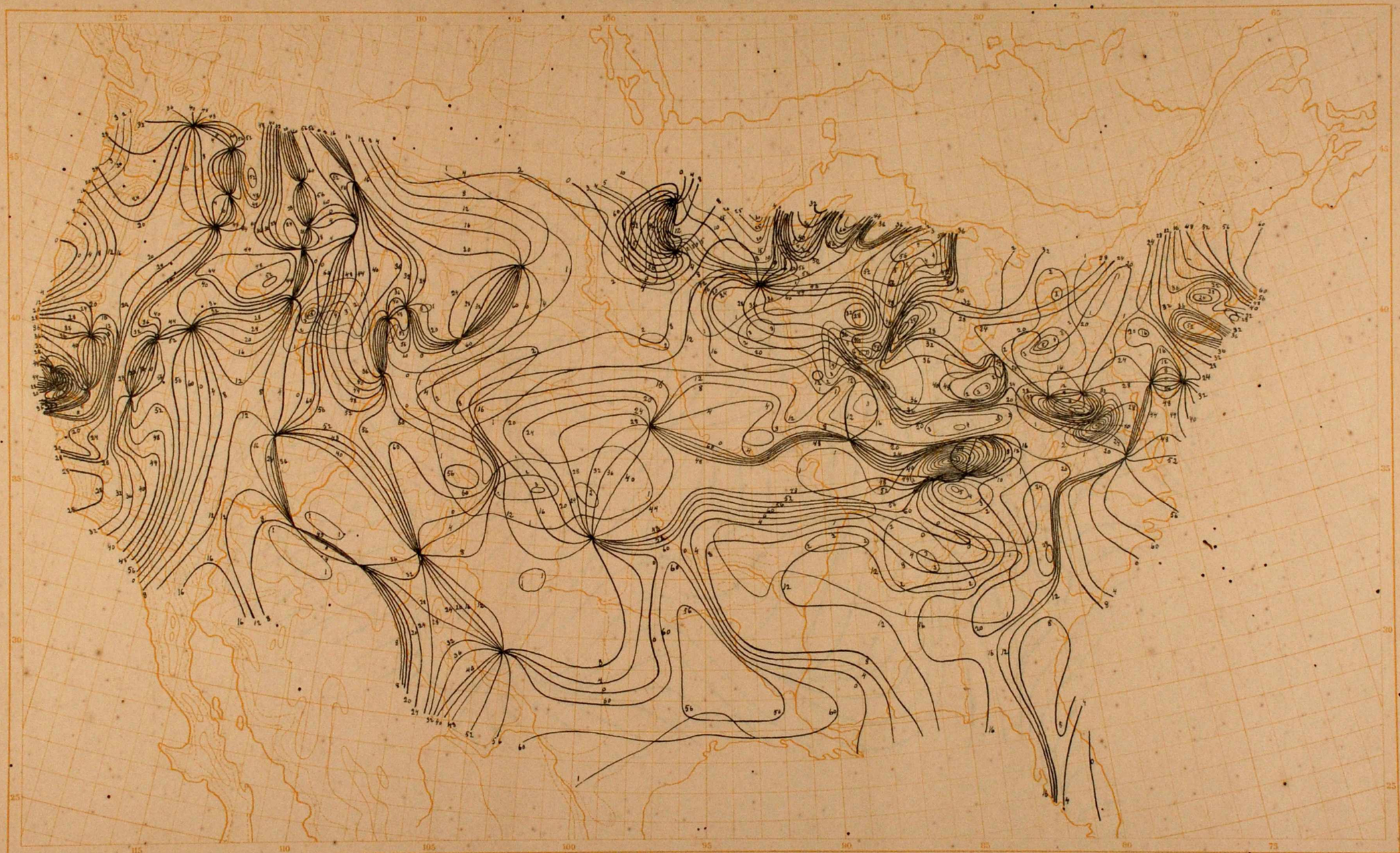

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PLATE XLIX

STATIONARY ACCELERATION REPRESENTED BY VECTOR-LINES AND CURVES OF EQUAL INTENSITY (10^{-4} M/SEC.^{2})

U. S. A. 1905, NOV. 28, 8—11 A.M. 75TH MERIDIAN TIME

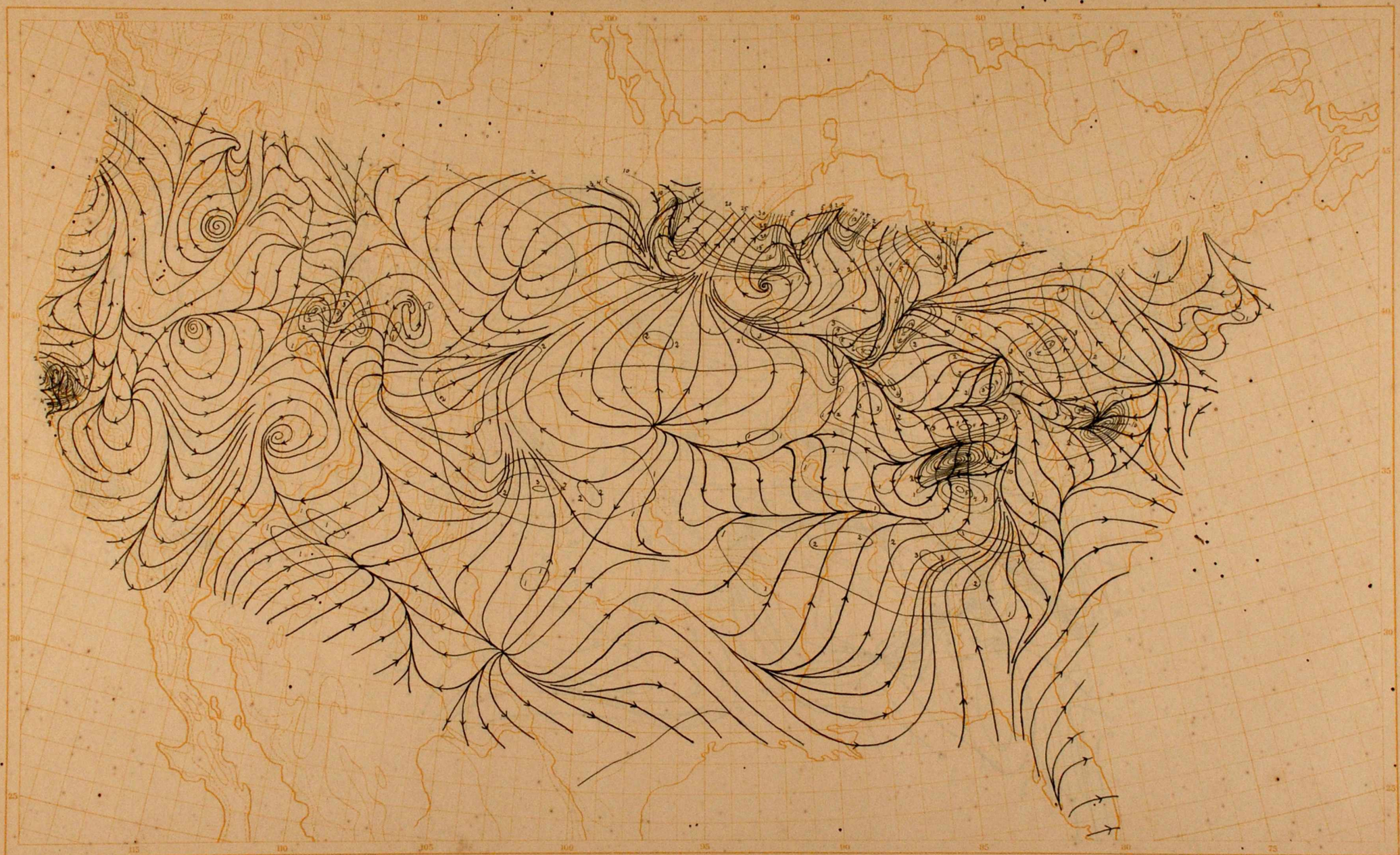

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PLATE L

TRUE ACCELERATION REPRESENTED BY ISOGONS AND CURVES OF EQUAL INTENSITY (10^{-4} M/SEC.^{2})

U. S. A. 1905, NOV. 28, 8—11 A. M. 75TH MERIDIAN TIME.

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PLATE LI

TRUE ACCELERATION REPRESENTED BY VECTOR-LINES AND CURVES OF EQUAL INTENSITY (10^{-4} M/SEC.^{2})

U. S. A. 1905, NOV. 28, 8—11 A. M. 75TH MERIDIAN TIME

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PLATE LII

SINGLE LINES REPRESENTING HEIGHT OF 1000 M-BAR SURFACE ABOVE SEA-LEVEL (DYNAMIC METERS).

(Stippled where the 1000 m-bar surface is below the ground)

DOUBLE LINES REPRESENTING HEIGHT OF 900 M-BAR SURFACE ABOVE 1000 M-BAR SURFACE (DYNAMIC METERS).

(Stippled where the 900 m-bar surface is below the ground)

EUROPE, 1907, JULY 25, 7 A. M. GREENWICH

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PLATE LIII

ARROWS AND NUMBERS (HEAVY) REPRESENTING WIND-DIRECTION.

NUMBERS (ORDINARY TYPE) REPRESENTING WIND-INTENSITY (M/SEC.)

EUROPE, 1907, JULY 25, 7 A. M. GREENWICH

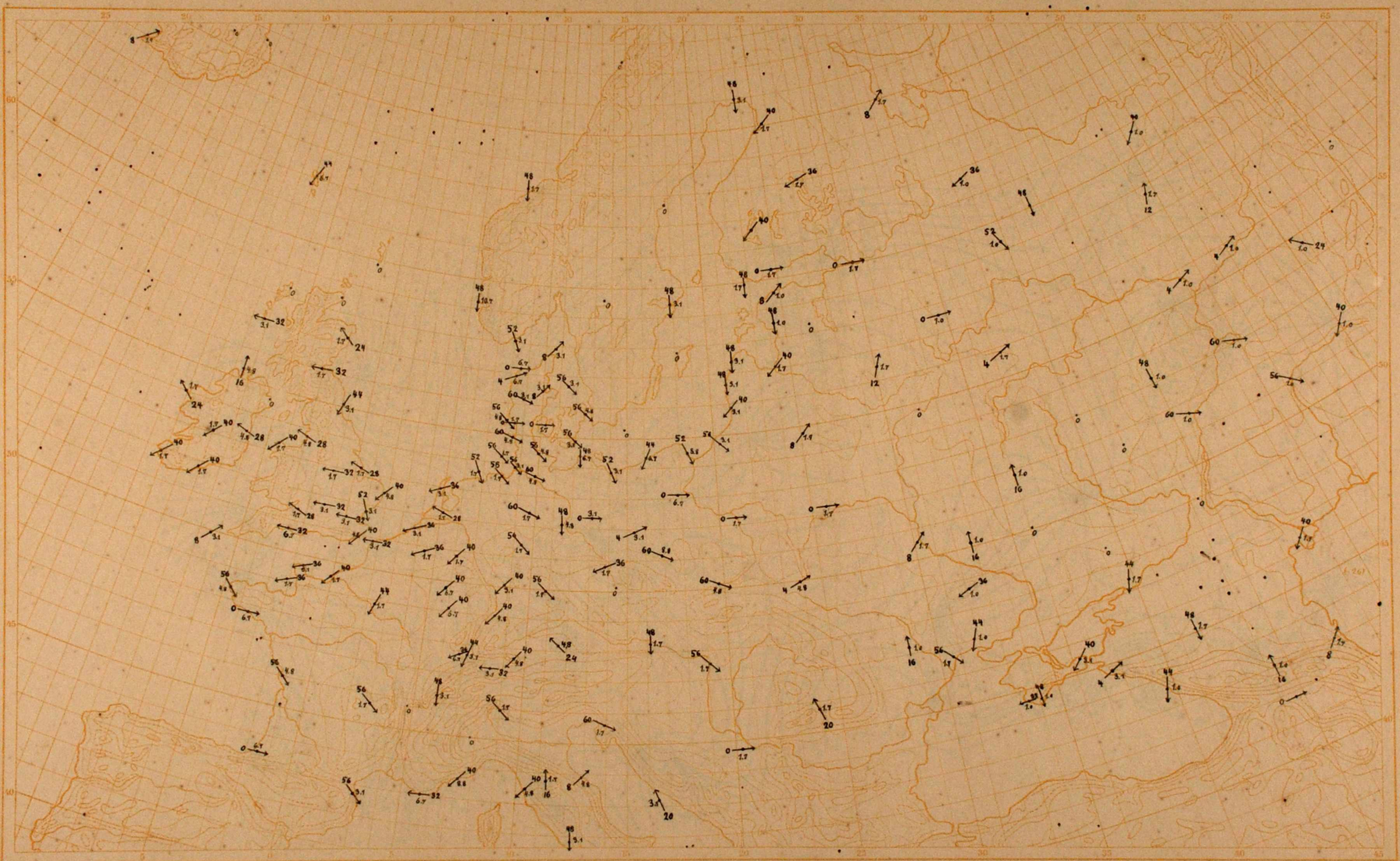

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PLATE LIV

ISOGONS AND CURVES OF EQUAL WIND-INTENSITY (M/SEC.)

EUROPE, 1907, JULY 25, 7 A. M. GREENWICH

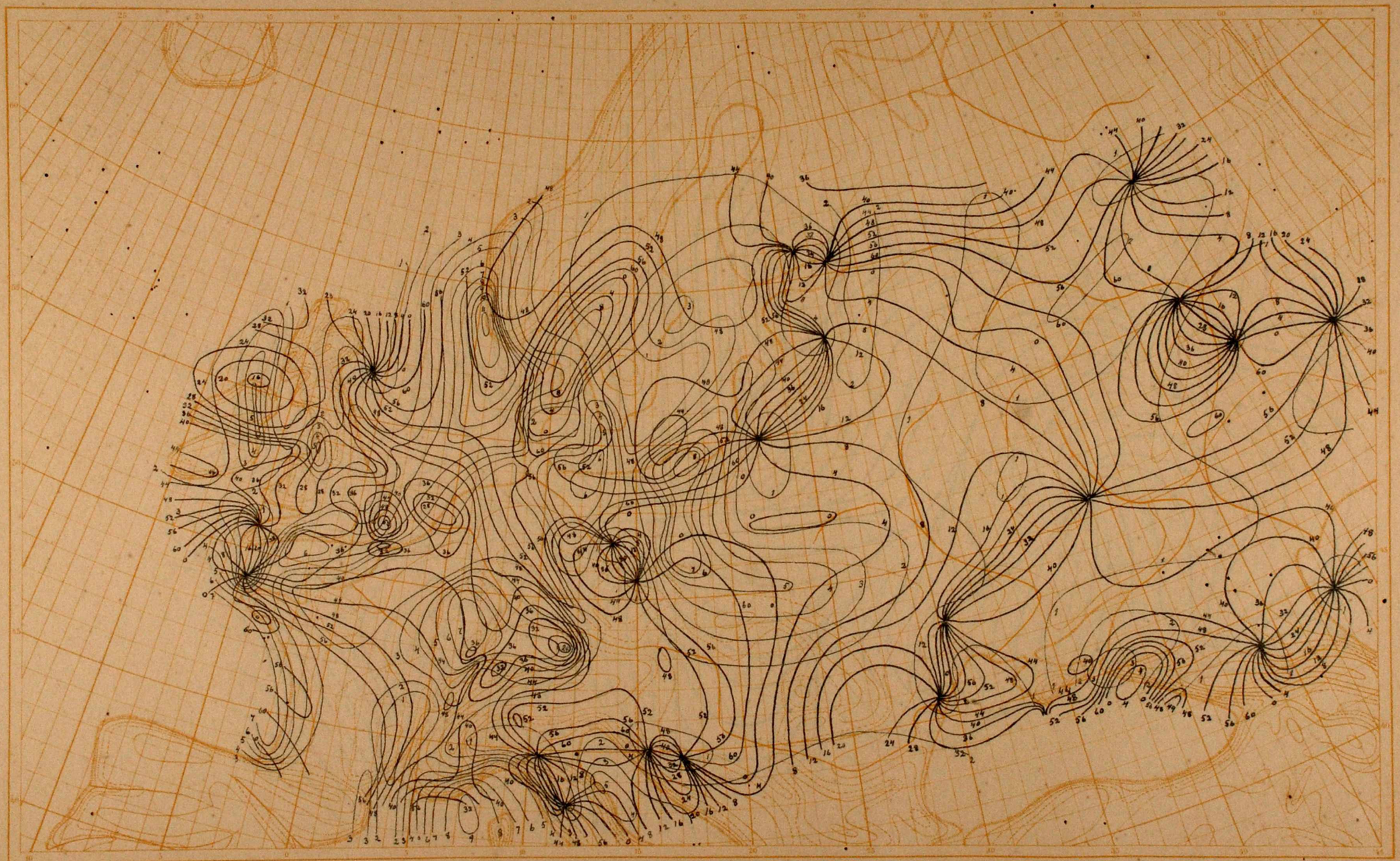

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PLATE LV

LINES OF FLOW AND CURVES OF EQUAL WIND-INTENSITY (M/SEC.)

EUROPE, 1907, JULY 25, 7 A. M. GREENWICH

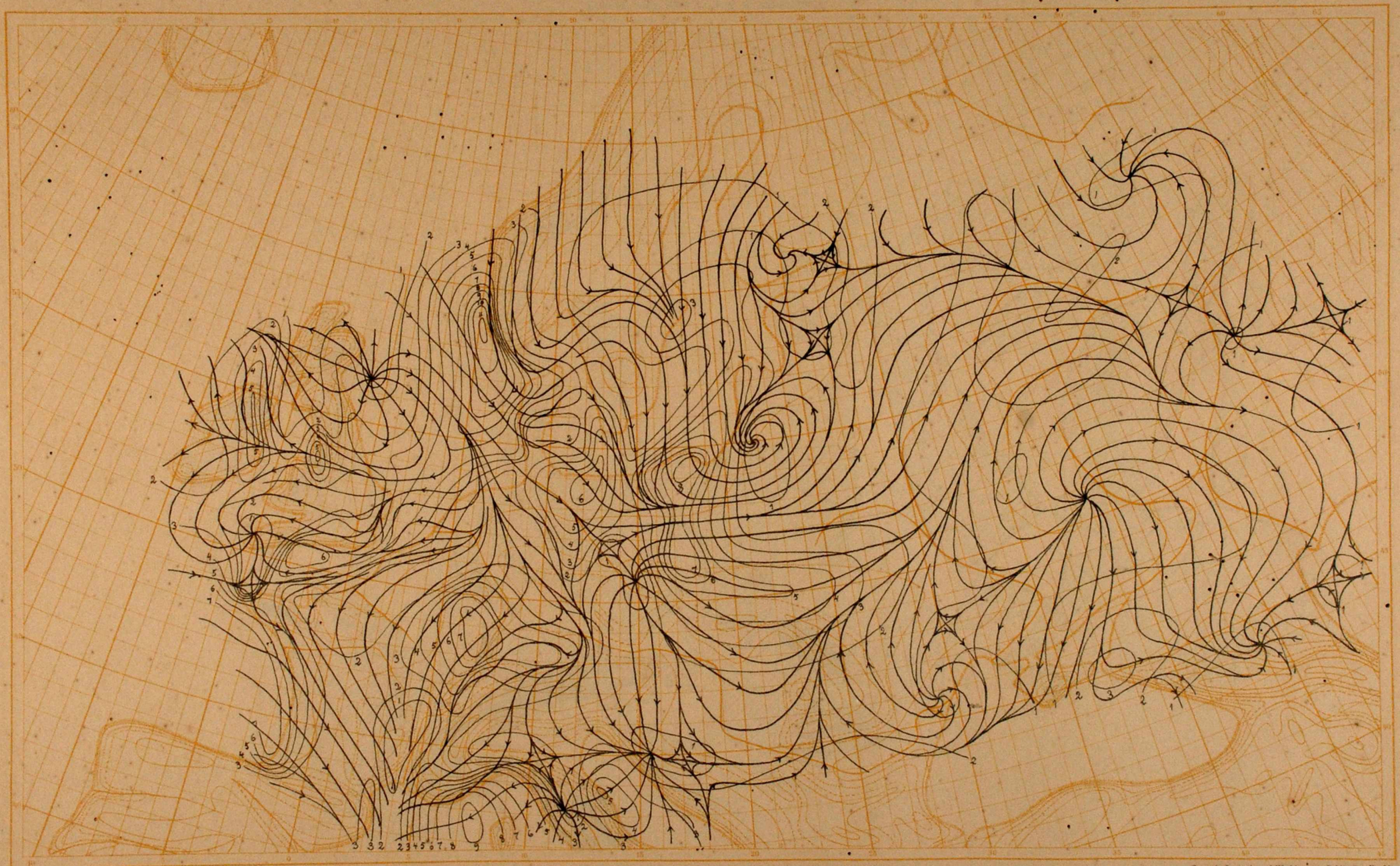

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PLATE LVI

VERTICAL SPECIFIC MOMENTUM AT THE GROUND (10^{-5} TON/M^2 SEC.)

(Areas of ascending motion shaded, of descending motion unshaded)

EUROPE, 1907, JULY 25, 7 A. M. GREENWICH

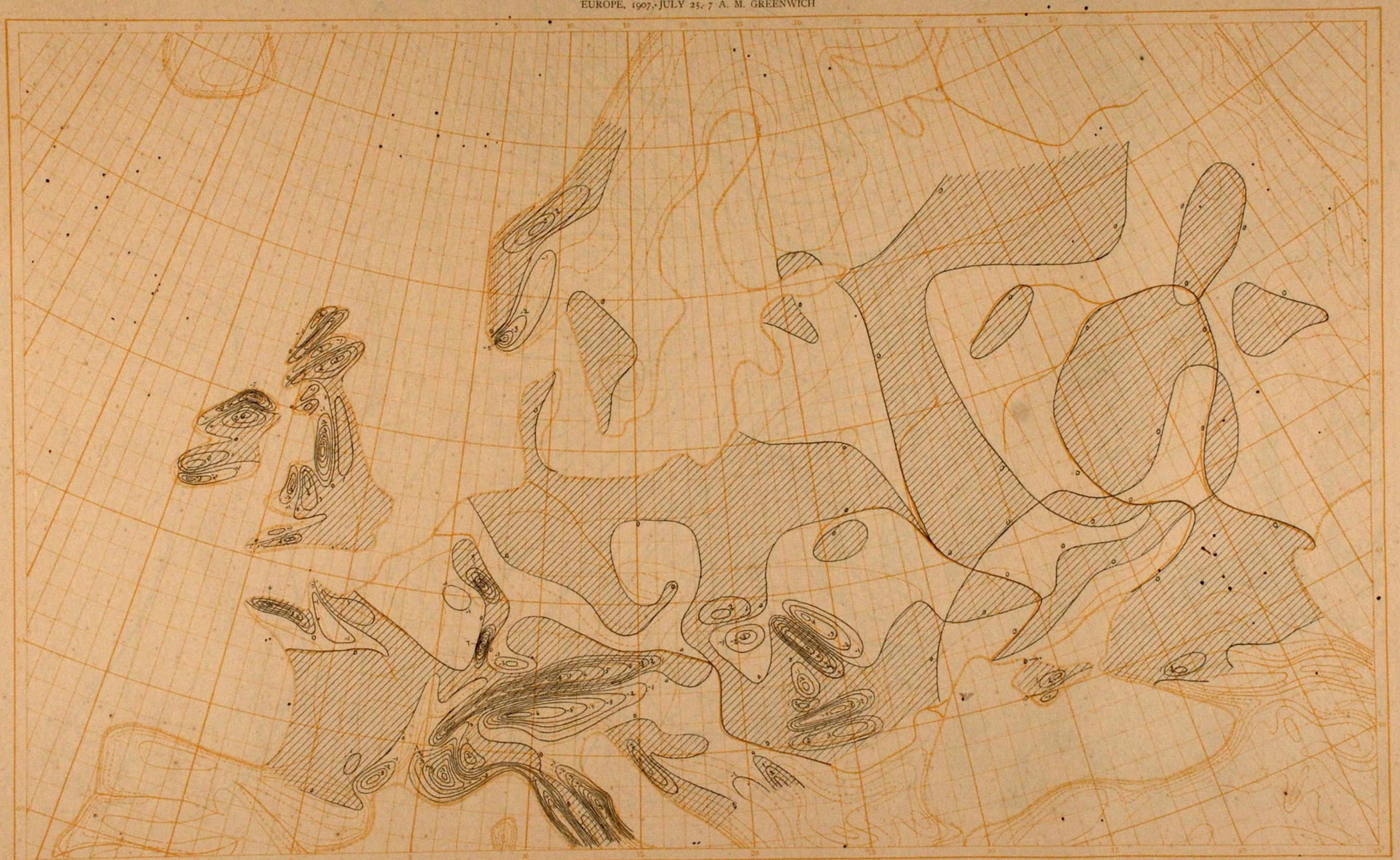

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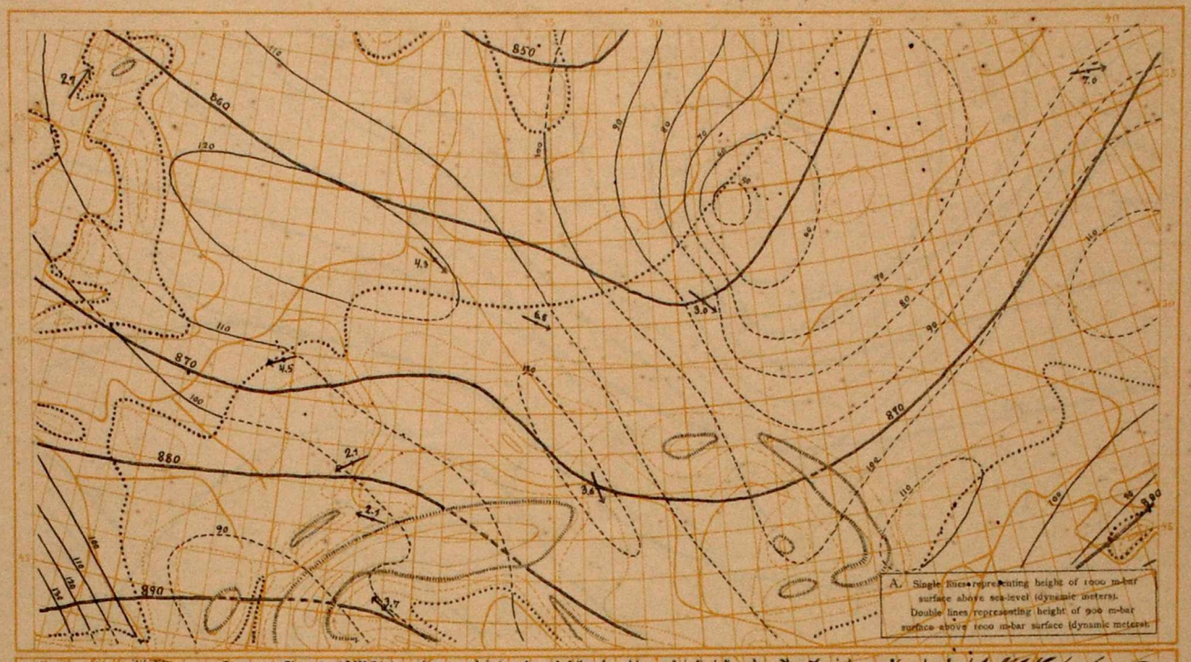
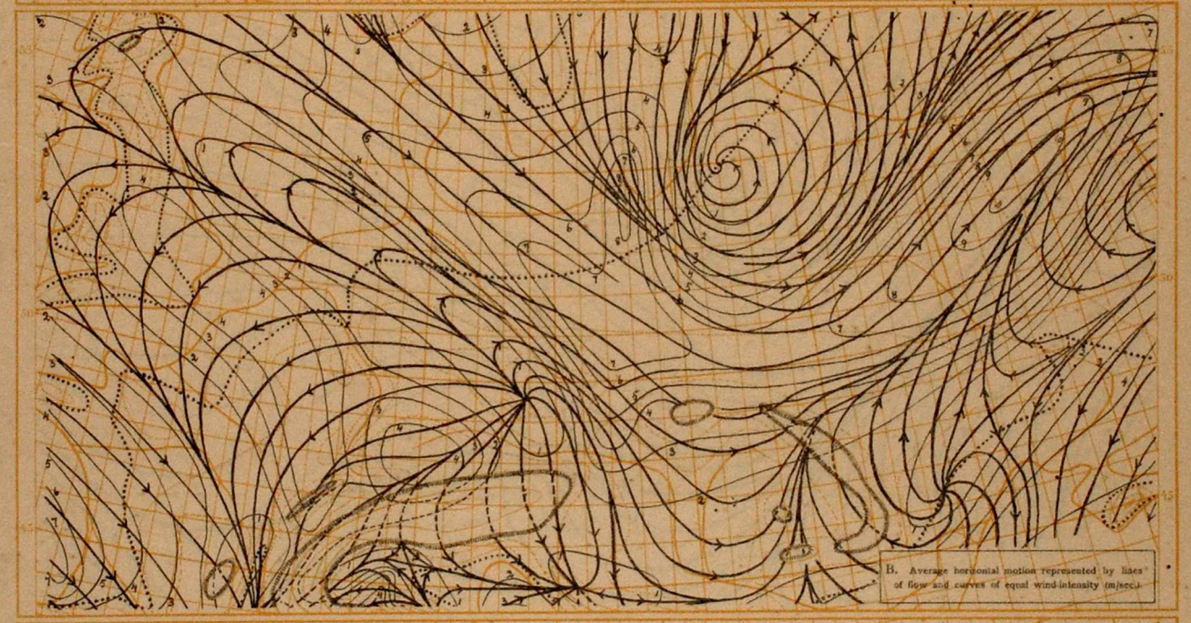
PLATE LVII

STANDARD ISOBARIC SHEET X

EUROPE, 1907, JULY 25, 7 A. M. GREENWICH


850
860
870
880
890
A. Single lines representing height of 1000 m-bar surface above sea-level (dynamic meters).
Double lines representing height of 900 m-bar surface above 1000 m-bar surface (dynamic meters).



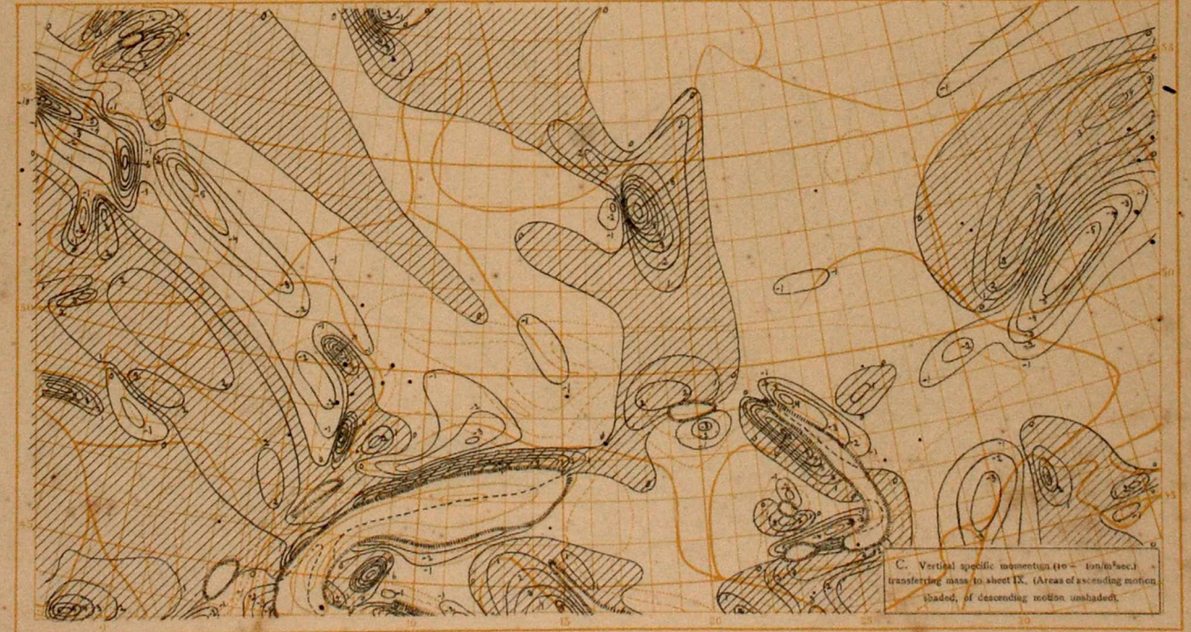

C. Vertical specific momentum (10⁻ tons/m²sec.) transferring mass to sheet IX. (Areas of ascending motion shaded, of descending motion unshaded).

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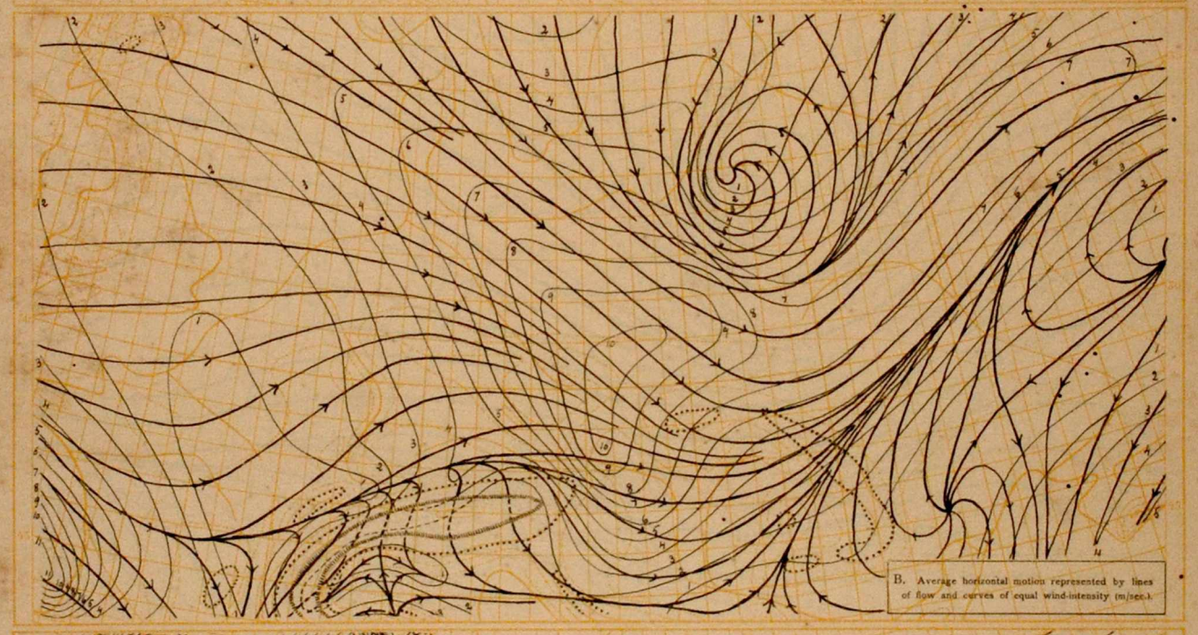
PLATE LVIII

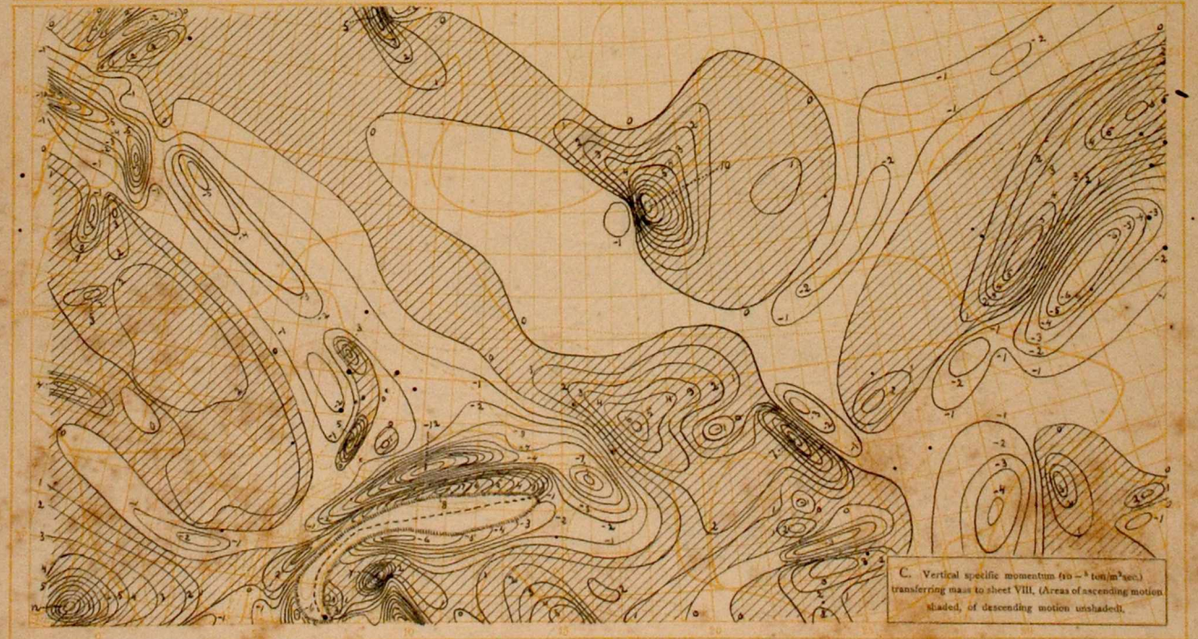
STANDARD ISOBARIC SHEET IX

EUROPE, 1907, JULY 25, 7 A. M. GREENWICH

A. Single lines representing height of 900 m-bar surface above sea-level (dynamic meters). Double lines representing height of 800 m-bar surface above 900 m-bar surface (dynamic meters).



B. Average horizontal motion represented by lines of flow and curves of equal wind-intensity (m/sec.).



C. Vertical specific momentum ($\frac{1}{10} - ^{5}$ ton/m^{2}sec.) transferring mass to sheet VIII. (Areas of ascending motion shaded, of descending motion unshaded).

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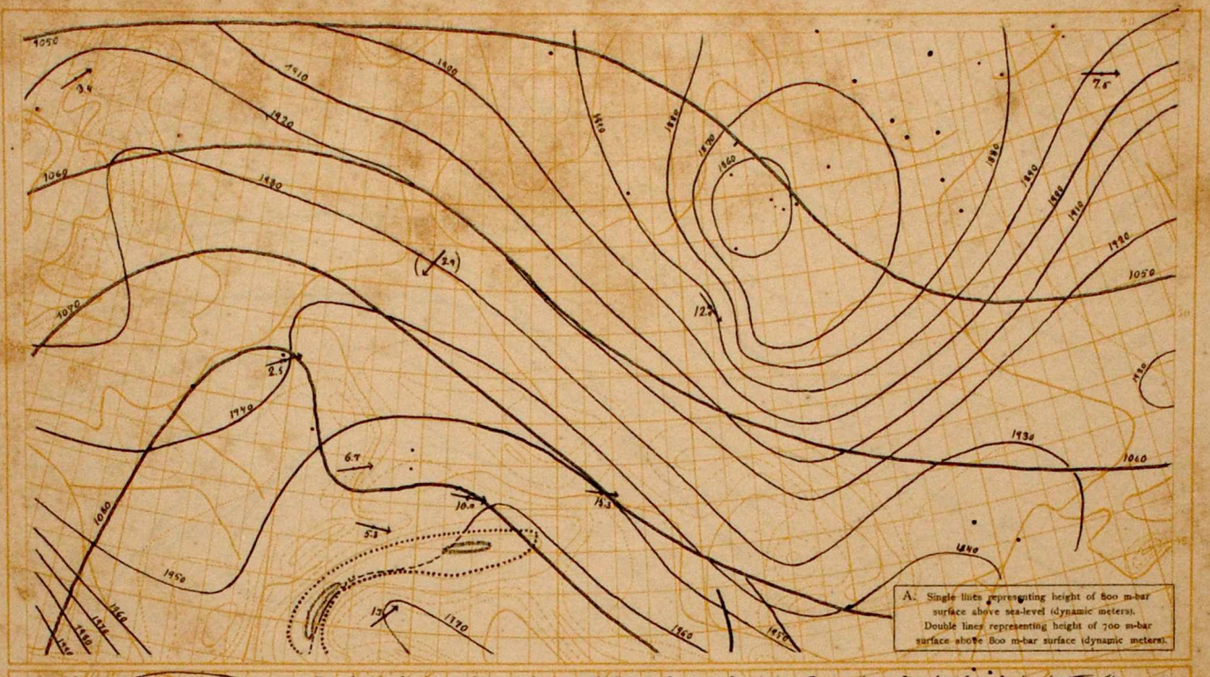
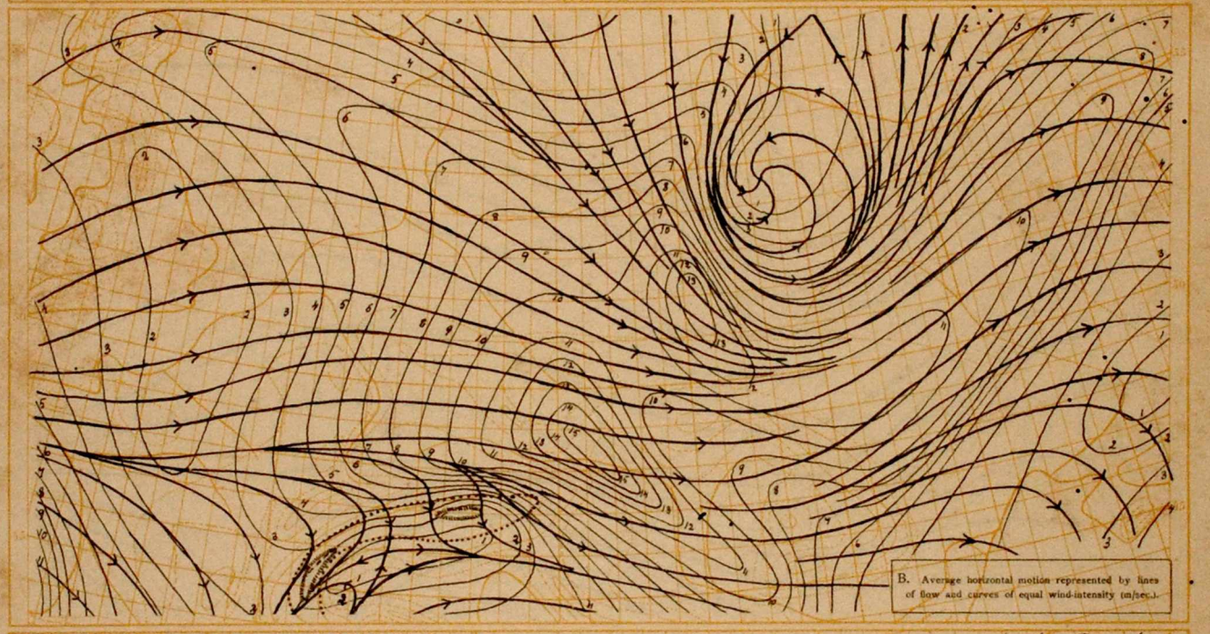
PLATE LIX

STANDARD ISOBARIC SHEET VIII

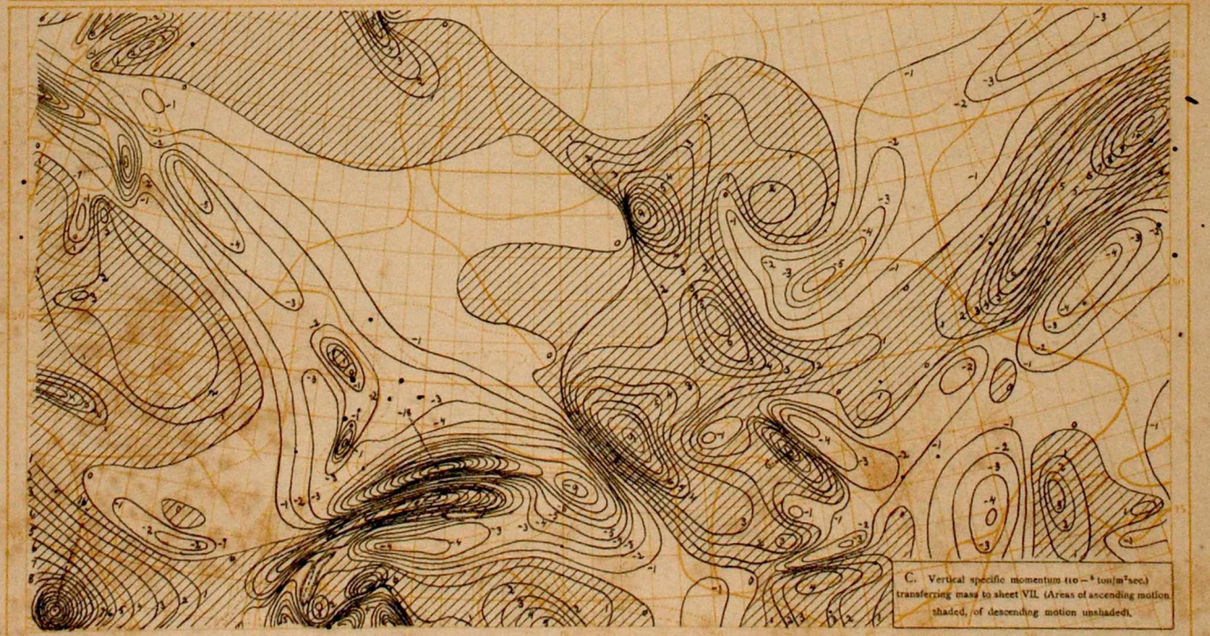
EUROPE, 1907, JULY 25, 7 A. M. GREENWICH



A. Single lines representing height of 800 m-bar surface above sea-level (dynamic meters). Double lines representing height of 700 m-bar surface above 800 m-bar surface (dynamic meters).



B. Average horizontal motion represented by lines of flow and curves of equal wind-intensity (m/sec.).

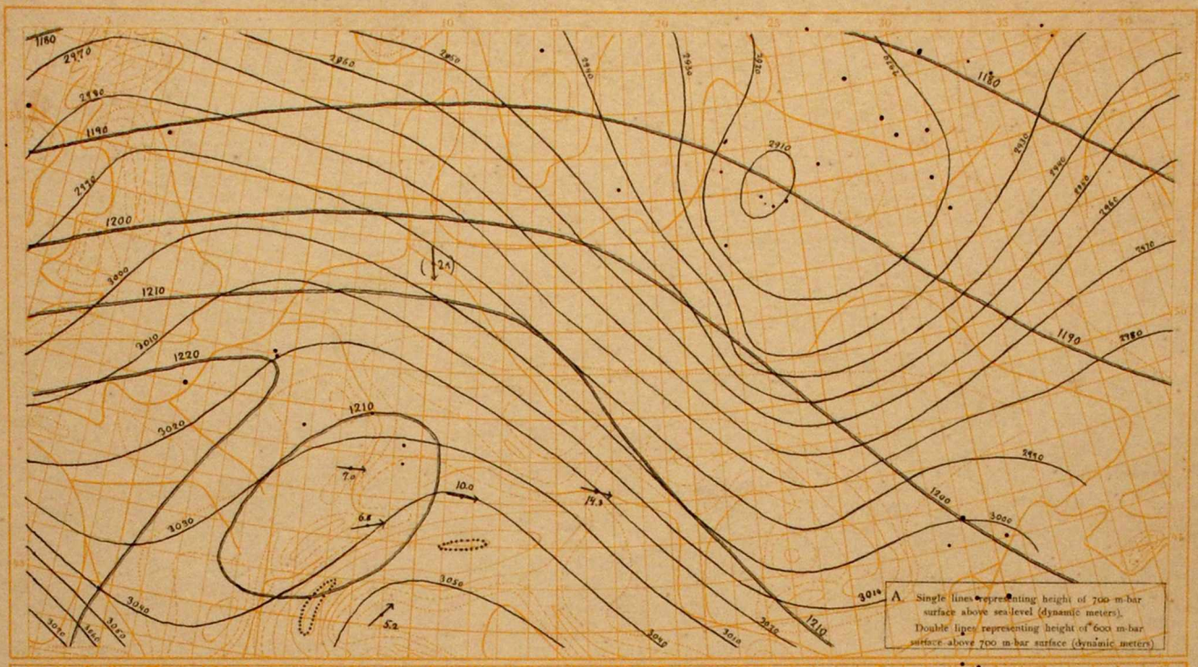


C. Vertical specific momentum (10^{-5} ton/(m²sec.)) transferring mass to sheet VII. (Areas of ascending motion shaded, of descending motion unshaded).

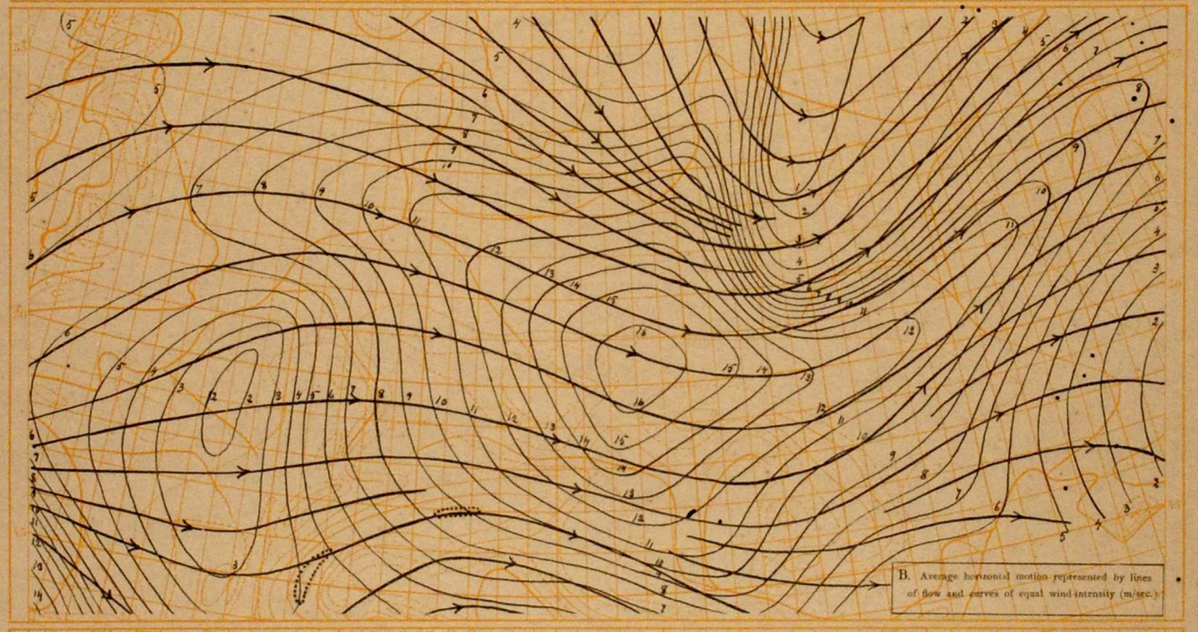
PLATE IX

STANDARD ISOBARIC SHEET VII

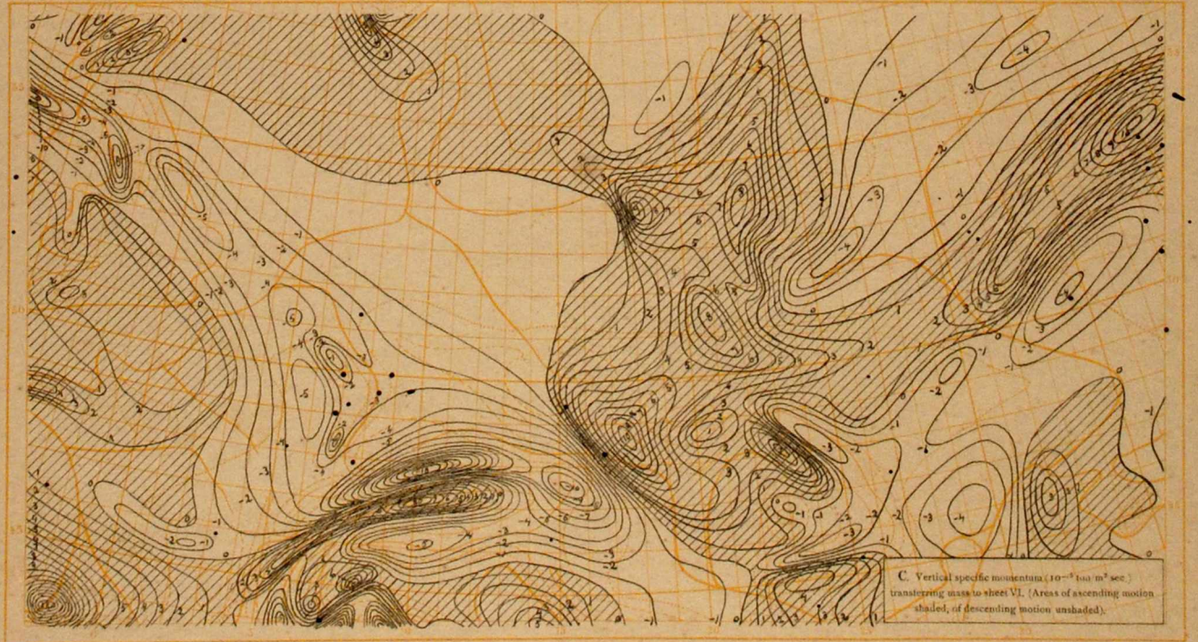
EUROPE, 1907, JULY 25, 7 A. M. GREENWICH



A. Single lines representing height of 700 m-bar surface above sea-level (dynamic meters). Double lines representing height of 600 m-bar surface above 700 m-bar surface (dynamic meters)



B. Average horizontal motion represented by lines of flow and curves of equal wind-intensity (m/sec.)



C. Vertical specific momentum (10^{-3} kgs/m^2 sec.) transferring mass to sheet VI. (Areas of ascending motion shaded, of descending motion unshaded).

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